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RICHARD H. EDMONDS, Pres. VICTOR H. POWER, Treas.
FRANK GOULD, Vice-Pres. I. S. FIELD, Sec'y.

RICHARD H. EDMONDS, Editor and General Manager

EDWARD INGLE, Managing Editor

ALBERT PHENIS, Staff Correspondent

BRANCH OFFICES:

NEW YORK, 52 Broadway CHICAGO, 1409 Fisher Bldg.
BOSTON, 733 Old South Bldg. ST. LOUIS, 627-630 Century Bldg.
NEW ORLEANS, 814 Maison Blanche

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CHANGING A SOUTHERN LIABILITY INTO AN ASSET.

THIS week's meeting at Savannah of the National Drainage Congress should emphasize the importance of hastening the day when more than 53,000,000 acres of wet lands, now unproductive for the most part and having the nature of a liability as long as they are not used, shall be a productive asset. Because there are millions of acres of fertile land in the South ready for the plow is no reason why other millions of acres of even greater fertility should not be freed from the incubus of water and, at comparatively small cost, be prepared for the husbandman. It has not been long since satisfaction in the knowledge of vast opportunities in virgin soils tended to induce carelessness in the use of them. Prodigality is easily begotten of profuseness of easily won possessions. But conditions are changing, and with them the point of view. In the first ten years of this century the average acre value of farm lands in the South increased from \$8 to \$19, or at the rate of 137 per cent. In 1910 the average acre value was nearly \$3.50 more than the average acre value for the whole country in 1900, which increased in ten years from \$15.64 to \$32.48. Whether or not the average value in the South is to reach by 1920 the average value in the country in 1910, the fact is that there has already been an increase in the South sufficient to impel the farsighted and progressive men of that section not only to advance measures for the conservation in full utilization of soils now available, but also to let in the light and air upon soils which, more or less under water, have been accumulating for centuries an abundance of plant food.

These wet lands are confined to no State. Of a total of 74,541,700 acres in the whole country counted in 1908, the South has 53,114,500, distributed as follows: Florida, 18,560,000 acres; Louisiana, 9,600,000; Mississippi, 6,173,000; Arkansas, 5,760,000; Georgia, 2,400,000; North Carolina, 2,400,000; Missouri, 1,920,000; South Carolina, 1,760,000; Texas, 1,620,000; Alabama, 1,120,000; Tennessee, 800,000; Virginia, 384,000; Maryland, 356,000; Kentucky, 224,000; Oklahoma, 35,000, and West Virginia, 2500 acres. But in the past six years much progress has been made under State, district and individual auspices in reducing this wet acreage, and such reclamation has been constantly under way on expanding lines. In Florida the drainage of the Everglades is bringing into farming possibilities 8000 or 9000 square miles of land, equal nearly to the whole land area of Maryland, and there are other notable projects in Virginia, with its Dismal Swamp; in North Carolina, particularly about Lake Mattamuskeet, affecting between 100,000 to 120,000 acres; in the

vicinity of Charleston, in South Carolina, where facts accomplished have spurred to greater things; in the delta region of Mississippi and in Louisiana, a pioneer in this respect; in Missouri and Arkansas, centering about the St. Francis basin a record in part of a seismic disturbance of the early part of the past century; in Georgia, which has, like a few other States, the advantage of a State law permitting local activities; in Tennessee and in Texas.

Few States of the South have to face the serious problem which is being solved in the trans-Mississippi States of the West by expensive irrigation. Where, as in Texas and in Arkansas, and as is being discussed for a portion of Oklahoma, irrigation is being promoted, it is with the advantage of the great volume of the flow of the Rio Grande in Texas, or in the panhandle of that State and in Arkansas with the ready aid of shallow wells tapping great underground streams. In Louisiana, by a simple device, the drainage process may be reversed and irrigation effected to overcome any possible deficiency of rainfall. In Arkansas inexpensive irrigation from the wells has made possible the wonderful development of rice-growing on the upland prairies of that State, and in Texas, where a score of millions of dollars have been invested in irrigation plants in recent years, in fertile lands and sugar mills, the notable enhancement of the value of lands has strikingly demonstrated how reclamation by drainage and irrigation is to add between \$3,000,000,000 and \$5,000,000,000 to the permanent wealth of the South when all economically reclaimable land has been taken up.

Much of the wet acreage of the section is confined definitely within State boundaries or within even smaller limits. The task of reclaiming such tracts is comparatively simple, either from the engineering, the financial or the political standpoint. When drainage operations by one State acting by itself in territory with characteristics common to it and another State, or when alluvial lands in the lower Mississippi are subject to overflow by water originating in many distant points of the great valley, the problem becomes quite complex, and, in some particulars, calls for the highest engineering skill and practical statesmanship of the broadest and most liberal kind.

From Missouri south to the Gulf of Mexico, for instance, there are alluvial lands, aggregating probably 30,000 square miles in extent, which are capable of yielding, when reclaimed and protected from future overflow, a crop of cotton as great as the greatest crop that the whole cotton belt of the South has ever produced in any one year, and that, too, without the use of an ounce of commercial fertilizer. Immediately connected, however, with the recovery and protection of those lands is the task, of manifold phases, of controlling the floods in the Mississippi River. That mighty task involves not merely the building and maintenance of levees along the stretches of the lower half of the valley, but also the reservoiring, if possible, of the flood surplus waters in the tributaries of the Mississippi extending as far as to New York and Georgia on the east and to Texas and Idaho on the west, in a drainage basin of more than 1,200,000 square miles. Hand in hand with the storage of this surplus water in flood times goes its utilization for irrigation and for the maintenance of the flow of streams in which hydro-electric developments have been made or may be contemplated, and with that is joined the project of forest reserves protecting the head-springs of the tributaries, a project only possible under Federal auspices. Thus, in any comprehensive plan for drainage, participation at more than one point by the National Government must be considered. It is not difficult to determine what those points are. Discretion and regard for the future should control all movements in this connection, to the end that improper relations between the National and State

governments or between either class of government and individuals may be avoided and that no injustice may be wrought by bringing the results of Federal or State energy and expenditure into unfair and unjust competition with the work of individuals who have depended solely upon their own initiative, enterprise and resources in reclamation work.

SUMMONS OF THE SOUTH.

III—FARM POTENTIALITIES.

GAUGED by the increase in capital invested in farms, the agricultural progress of the South in the past generation has been one of the most notable features of the general material advance of that section. In 1910 such capital in the South, represented in the value of lands and improvements, of implements and livestock, was \$10,961,865,000, only \$1,142,137,000 less than such capital in the whole country, having more than three times the area of the South, in 1880. Between 1880 and 1910 such capital increased in the South from \$2,762,077,000 to \$10,961,865,000, or by \$8,199,788,000, equal to 296.9 per cent., and in the rest of the country from \$9,341,925,000 to \$30,029,134,000, or by \$20,687,210,000, equal to 221.4 per cent. This increase was most marked in the decade of 1900-1910, coincident with the marked rise in the value of farm lands in that period with the general increase in the value of farm products, especially cotton. This growth is indicated in the following table comparing for 1880 and 1913 the estimated value of farm products, exclusive of additions to livestock, or livestock sold or slaughtered:

ESTIMATED VALUE OF FARM PRODUCTS.*

	1880.	1913.
Alabama	\$56,873,000	\$227,596,000
Arkansas	43,796,000	157,951,000
Florida	7,439,000	52,504,000
Georgia	67,029,000	297,388,000
Kentucky	63,850,000	158,944,000
Louisiana	42,884,000	129,377,000
Maryland	28,839,000	63,130,000
Mississippi	63,702,000	194,794,000
Missouri	95,913,000	251,372,000
North Carolina	51,730,000	229,946,000
Oklahoma		151,672,000
South Carolina	41,108,000	189,701,000
Tennessee	62,076,000	175,158,000
Texas	65,204,000	548,417,000
Virginia	45,726,000	172,162,000
West Virginia	19,360,000	78,774,000

Total.....\$755,529,000 \$3,078,886,000
United States.....\$2,212,541,000 \$7,497,237,000

*Not including additions to livestock or livestock sold or slaughtered.

These figures, those for 1880 being official and those for 1913 being conservatively estimated upon figures representing about 75 per cent. of the total, show that the increase in the value of farm products in the period covered was from \$755,529,000 to \$3,078,886,000, or by \$2,323,357,000, equal to 307.5 per cent. in the South, and from \$1,457,012,000 to \$4,418,351,000, or by \$2,961,339,000, equal to 203.2 per cent., in the rest of the country, and that the Southern value in 1913 was \$866,345,000 greater than the value in the whole country in 1880.

Advance suggested in this approximation is, after all, only the reason for the faith in the future. It is a demonstration of potentialities rather than a record with which the South must be content. For, the production to the value of more than \$3,000,000,000 in 1913 was made upon less than 150,000,000 acres of the total 600,000,000 acres of Southern land. There has recently been made an official estimate, based upon figures of 1900, of the proportion of land in the United States available for agriculture. This shows that of 604,856,000 acres in the South, 541,320,000 acres, or 89.4 per cent., are so available,

while of 1,298,000,000 acres in the rest of the country, 962,050,000 acres, or 74.1 per cent., are so available. Not only is a greater proportion of Southern land fit for agriculture, but in the South there is a greater quantity of land not yet farmed than there is in the rest of the country.

In 1909 more than 18 per cent. of the total area of the South and 15.5 per cent. of the total area of the rest of the country was tilled. Of the total area of the South 454,260,000 acres, or 75.1 per cent., is available for tilled crops, and of the rest of the country 687,540,000 acres, or 52.9 per cent., are so available. The 109,860,000 acres in the South tilled in 1909 represented but 24.2 per cent. of the tillable area, while the 201,140,000 acres in the rest of the country represented 29.2 per cent. of the tillable area. The potentiality by separate States in the South is shown in the following table:

SOUTH'S FARM POTENTIALITIES.

	Estimated acreage available for		Acres in
	Tilled Crops.	Non-tilled Crops.	Tilled Crops, 1909.
Alabama	25,410,000	4,620,000	7,260,000
Arkansas	25,500,000	5,100,000	5,440,000
Florida	25,550,000	4,550,000	1,400,000
Georgia	30,780,000	3,800,000	9,840,000
Kentucky	20,540,000	3,380,000	6,240,000
Louisiana	22,040,000	2,320,000	3,480,000
Maryland	4,860,000	600,000	1,800,000
Mississippi	24,800,000	3,300,000	6,300,000
Missouri	33,880,000	6,600,000	14,520,000
North Carolina	24,490,000	3,410,000	5,580,000
Oklahoma	33,880,000	9,040,000	11,880,000
South Carolina	16,000,000	2,200,000	5,200,000
Tennessee	19,980,000	4,320,000	6,480,000
Texas	117,600,000	26,840,000	18,480,000
Virginia	19,500,000	3,380,000	4,160,000
West Virginia	9,450,000	3,600,000	1,800,000
Total	454,260,000	87,060,000	109,860,000
United States	1,141,800,000	361,570,000	311,000,000

It must be borne in mind that this tillable acreage includes, not only land that has already been brought under cultivation by means of the plow, but also that which in the future may become available by clearing of woodland, by drainage and by irrigation. Besides the land suitable for tilled crops, the South has 87,000,000 acres and the rest of the country 274,510,000 acres, much of it already occupied, not suitable for tilled crops, but valuable for fruit raising or for pasturage. Only 399,000,000 acres in the whole country, 63,000,000 of them in the South and 336,000,000 of them in the rest of the country, can never be of agricultural use. Included in that acreage is part of the area of 258,000,000 acres in the South and 286,000,000 acres in the rest of the country in woodland and forest. To meet the lumber requirements of the country for all time at least 400,000,000 acres, equally divided between the South and the rest of the country, should be kept in woodland. If this be done, the South would still have available for agriculture nearly four times the amount of land that was tilled in 1909. In that, everything else remaining as at present, is the possibility of the South's raising crops to an aggregate value of \$12,000,000,000, or nearly \$5,000,000,000 more than the value of all crops in the country at present.

But things are not to remain as at present. In progress already made in intensive cultivation is the promise that the great increase in the aggregate value of farm products in the South is to come through increased production per acre. For example, in one Southern State 232.7 bushels of corn have been raised on a single acre of land, and in another, 228.7 bushels. Other acre productions have been 2.38 bales of cotton, 150 barrels of apples and from 7500 to 12,500 pounds of beans, from 12,500 to 15,000 pounds of potatoes, from 16,000 to 24,000 pounds of oranges, from 20,000 to 24,000 pounds of pineapples and from 15,000 to 25,000 pounds of eggplants.

Started in a small way about fifty years ago, in the Norfolk region of Virginia, the industry of raising early vegetables and fruit for Northern and Western markets has extended down the Atlantic and Gulf coasts to Texas and into some of the upland territory of the South, and now represents an annual output valued at \$100,000,000 at least. What are known as the Norfolk fine sandy loam, the Norfolk fine sand, the Portsmouth series, the Coxville fine sandy loam and the Coxville sandy loam are soils especially adapted to this trucking, and there are 25,000,000 acres of such soils in the South. Not less than 4,682,992 acres of Norfolk fine sandy loam have been definitely traced, with a strong possibility that

they represent a total of 20,000,000 acres, while the 2,014,334 acres of Norfolk fine sands represent a possible 10,000,000 acres. Hardly one-tenth of 1 per cent. of the total area of Norfolk fine sandy loam is now used for trucking, and less than 10 per cent. of the Norfolk fine sand and less than 25 per cent. of the Norfolk fine sandy loam are used for any agricultural purpose save grazing. It may, therefore, be fully expected that expansion in the tilled acreage of the South will mean a far much larger acreage than at present devoted to truck raising, which yields much more per acre than most other crops.

In that is the promise that the South is to become the great market garden of the United States. As a matter of fact, that section is capable of raising practically every crop known in this country, but it also has a virtual monopoly of certain crops.

Only a few thousand of the 14,594,000 bales of the American cotton crop of 1913 were grown outside the South, and nine Southern States yield virtually all of the annual crop of from 22,000,000 to 25,000,000 bushels of rice grown in continental United States. In 1913 the South harvested \$766,652,000 worth of corn, \$135,402,000 of hay, \$111,033,000 of wheat, \$95,945,000 of tobacco, \$71,974,000 of oats, \$37,611,000 of Irish potatoes, \$37,600,000 of sweet potatoes, \$21,797,000 of rice, \$2,471,000 of rye, \$1,372,000 of buckwheat, and the estimated value of other of its crops were orchard fruits, \$40,000,000; sugar-cane, \$21,000,000; peanuts, \$18,000,000; nursery products, \$9,000,000; citrus fruits, \$7,500,000; sorghum, \$7,000,000; small fruits, \$6,500,000; peas and beans, \$6,500,000; kafir corn, \$6,000,000; broom corn, \$3,000,000; nuts, \$2,000,000, and grapes, \$2,000,000.

Of thirteen crops, all but two of which are common to most parts of the country, the estimated average acre value is \$20.08 in the South and \$16.91 in the United States. Such is the deduction drawn from the figures of 1913, which, however, must be read in connection with the fact that, speaking generally, the seasonal conditions in that year were better in the States of the South below the Potomac and east of the Mississippi than in the rest of the South than in the rest of the country. Corn in the South averaged in value \$16.10, compared with \$15.99 in the country; wheat \$12.54 in the South, compared with \$12.15 in the country, and oats \$12.19 in the South, compared with \$11.45 in the country, while Irish potatoes in the South averaged \$63.75 to the acre, compared with \$11.45 in the country, while Irish potatoes, largely a Southern crop, averaged about \$3 less per acre than the average in the whole country. On the other hand, the average in the South for buckwheat, which raises hardly one-seventh of the country's crop, was nearly \$3 more per acre than the average for the country.

If the South should utilize to the full its present tilled area of 110,000,000 acres, it could easily double the aggregate value of its farm crops. Upon 36,000,000 of its acres it produced last year 15,000,000 bales of cotton, valued, with its seed at \$1,000,000,000. Without increasing its acreage in cotton the South could make more than double its present cotton crop. Upon 48,000,000 acres the South raised in 1913 corn to the value of \$707,000,000, and upon less than 9,000,000 acres wheat to the value of \$111,000,000. In grain the South is not living up to its opportunities. If fifteen States of that section were now raising as much wheat in proportion to population as was raised there before the war, the annual crop would be 123,000,000 bushels instead of 118,000,000 or 120,000,000, and if the same fact obtained as to corn, the South's crop would be about 1,200,000,000 bushels instead of 800,000,000 or 900,000,000 bushels. Less than half a dozen Southern States are now producing more wheat than they raised fifty years ago, and not a single one is producing as much corn per capita.

What has been done can be done and can, with the progress that has been made in agricultural science, be bettered. There is no section of like area on the globe presenting the opportunities for such betterment equal to those of the South.

A CREDIT OMITTED.

THE MANUFACTURERS RECORD regrets that it neglected to credit the facts in the article on page 52 of its issue of April 16, dealing with the Southern Aluminium Co., to the Charlotte (N. C.) Observer, from which they were derived.

SOUTHERN LUMBER FOR EGYPT.

THIRTY carloads of red gum lumber were started in one shipment on April 14 from the plant of the Lamb-Fish Lumber Co. at Charleston, Miss., on the long journey, by way of Pensacola, Fla., to Alexandria, Egypt. In explanation, George Lands, traffic manager of the company, writes to the MANUFACTURERS RECORD:

This company, a number of years ago, realizing the fact that difficulty would be experienced in disposing of its full cut (which is over 40,000,000 feet of hardwood per annum) to domestic trade, took steps to develop an outlet in European countries. Today our export business aggregates fully 40 per cent. of our output, and our experience has been that this foreign business is easy to build up and very satisfactory to handle.

As the MANUFACTURERS RECORD is recognized everywhere as being the barometer of business conditions throughout the South, and as it has been the policy of your management to encourage greater activities on the part of Southern manufacturers toward securing a larger share of the requirements of foreign concerns, we thought possibly this item would prove of interest to you.

It is an item of interest to every man who knows what the South is capable of doing and welcomes every fact proving that the capacity is being exerted. While congratulating the lumber company upon its eminent success, as manifested in this latest shipment, we would make the suggestion that the call from abroad for red gum presents an incentive to ship the material in more advanced shape than lumber, and thus gain the greater advantage. We advocate the policy of the South's making the most of its raw material, and, as to red gum, we quote Hu Maxwell of the United States Forest Service:

It is shipped in the log or as veneer or as rough lumber to Northern factories making furniture, musical instruments, interior finish and office fixtures, and it goes out in the markets of the world under the name of Circassian walnut, cherry, birch and mahogany. It lends itself to more imitations than any other known wood. The Italians and French buy it, carry it across the seas, make it into furniture and sell it as French or Italian walnut. The English work it into "satin walnut." Some of this high-grade product comes back to the land where the red gum trees grow and is sold to wealthy people who can afford to buy it. The buyer marvels at its beauty, and little suspects that the 2000 per cent. advance which he pays on the selling price of the red gum lumber goes to remunerate the thrifty foreigner for knowing a good thing when he sees it and understanding how to turn his knowledge into money.

Verbum sap.

GOOD TIME FOR PUBLIC IMPROVEMENTS

THE quick sale of \$65,000,000 of 4½ per cent. New York city bonds to a syndicate at 101.45 calls particular attention to the demand for this class of public securities, and should serve as a reminder to other cities and towns, especially in this part of the country, that the present is a good time to consider questions relating to public improvements and to the marketing of securities to finance them. While 4½ per cent. bonds might not command a premium in a majority of places, there is no doubt that just now issues at suitable rates of interest will meet with a better market than usual. The exemption of this class of bonds from the operation of the Federal income tax has lately become a reason for their popularity with careful investors, in addition to their other sterling qualities. These being the conditions in the financial market, bonds for public works of all kinds are now pretty sure of meeting with a favorable reception on terms more advantageous to the issue than are commonly to be obtained. Consequently, it is well to start town, city, county or State improvements; provided, of course, that local conditions in any case are not unfavorable.

THE SOUTH'S COAL OUTPUT.

IN 1880 the South mined less than 10 per cent. of the coal mined in the United States. At present its output is nearly 25 per cent. of the total. In 1913, according to the figures of the Coal Trade Journal, the coal mined in the country amounted to 565,975,502 tons, and of that amount 136,776,051 tons were mined in the South, the output by States having been, West Virginia, 69,491,646 tons; Alabama, 17,884,745; Kentucky, 17,250,000; Virginia, 8,300,000; Tennessee, 6,600,000; Maryland, 4,756,

000; Missouri, 4,293,300; Oklahoma, 3,797,899; Texas 2,200,000; Arkansas, 1,952,461, and Georgia, 250,000 tons. West Virginia's 1913 output was within 2,000,000 tons of the total output of the whole country in 1880, and the South's 1913 output was 150 per cent. greater than its own output in 1900 and nearly twice as great as the country's in 1880.

MANUFACTURING IN CITY GROWTH.

RICHMOND has recently been acquainting itself with its equipment for industry and its accomplishments on that line by way of a manufacturers' exhibit seeking to show practically every article made in the city and likely to become one of its permanent institutions. The effect has been locally described as amazement at the variety and extent of the city's manufacturing interests. But men, either residents of Virginia's capital city or frequent visitors there, who have taken the trouble to study conditions there during the past twenty years or more are not amazed at the exhibit of today. Twenty-five years ago, when some of the men now to the front in everything that makes for Richmond's progress were still schoolboys, it was possible to look from the back windows of many a business house of the city upon remnants of the ruins of the fire that marked the fall of the city in 1865. At that time there survived in its residential and business sections much of the distinction of its ante-bellum period, the air of open-hearted hospitality taking time to be agreeable not being confined to the lawned homes of Franklin street and adjacent avenues, but extending down into the counting-rooms and offices of Main street and its neighbors. There was bustle, though, and money was being made in trade and manufacturing. In the latter, tobacco and iron dominated, perhaps, with survival of the flour industry, which had not flourished as formerly, after the change in the fiscal policy of at least one South American country and the rise of the mills in the Northwest close to the grain fields. At that time much Richmond capital was seeking investment in distant sections, in the farther South, in Minnesota and on the Pacific coast. But just about that time the conviction was taking practical direction that Richmond possessed many advantages for manufacturing, and that it was best for everybody concerned to invest Richmond capital in Richmond enterprises, a conviction which it is safe for any city to apply and which Richmond has followed to its great advantage.

Within ten years results of this policy of home capital for home enterprises were manifest on every side. Around the tobacco factories had developed other plants, such as a paper-box works and a japanned-ware factory, growing from a modest establishment where tags for tobacco were made, while cedar works, at first small, had gradually extended over a large area. A plant for the manufacture of meat-juice, originating in experiments for purely personal use, had developed such a trade at home and abroad as to make a marked increase in the cattle trade of the city, with its outcomes in modern stock-yards and an abattoir. Iron works, that were nationally famous fifty years before, were in operation on a greater scale, and locomotive works had been added to the various metal-working industries of the city. A fertilizer plant had become the nucleus of a great aggregation of capital, practically dominating the industry in the South, plans were being pushed for the hydro-electric development of the falls of the James and a flour-milling business had been organized that is now exporting more flour than did the mills of the city fifty years ago, some of the shipments going as far as the interior of Africa. There was, too, the promise of the shoe-manufacturing industry, that has since become such a factor in the city's industrial life.

These are but impressionist outlines of the picture that industrial Richmond presented at the beginning of this century. The main point to be kept in mind is that the change had been brought about by Richmond men using Richmond capital, with enough to spare to enable the city to strengthen the connections with other quarters which have added so greatly to its financial strength in more recent years. Conversely, Richmond financial institutions readily fell into the habit of co-operating liberally with Richmond energy and courage in furthering manufacturing. Consequently, the city today is the home, not

only of half a dozen or more extensive plants, some of them unique in their position and importance, but also of a host of smaller ones making things to sell in other parts of the world, enlarging their operations as demand for their products increases and forming a rallying-point with financial institutions for a strong and united effort in behalf of every purpose to make Richmond greater and greater and more self-contained than ever before.

COTTON IN EXPORTS.

COMPARED with the same period in the fiscal year ended June 30, 1913, the value of merchandise exported from the United States in the first nine months of the present fiscal year shows a decrease of \$25,015,408. Had it not been largely for cotton the decrease would have been considerably greater. Comparison of the values in the first nine months of the fiscal years 1913 and 1914 of six leading classes of exports, constituting in the aggregate nearly 48 per cent. of the value of all merchandise exports, emphasizes that fact. It is as follows:

	1913.	1914.
Cotton	\$470,807,619	\$542,270,833
Breadstuffs	159,757,196	123,276,267
Mineral oils	96,879,401	110,351,633
Meat and dairy products	93,682,137	103,910,993
Cottonseed oil	15,764,901	10,988,710
Cattle, hogs, sheep	758,520	700,338
Total	\$837,649,774	\$891,498,774
Aggregate	\$1,908,058,373	\$1,883,042,965

There were gains in three of these classes of exports—in cotton, from \$470,807,619 to \$542,270,833, or by \$71,463,214; in mineral oils, from \$96,879,401 to \$110,351,633, or by \$13,472,232; in meat and dairy products, from \$93,682,137 to \$103,910,993, or by \$10,228,856, a total of \$95,164,302, cotton's increase being nearly 76 per cent. of it. There were losses in breadstuffs from \$159,757,196 to \$123,276,267, or by \$36,480,929; in cottonseed oil, from \$15,764,901 to \$10,988,710, or by \$4,776,191; in cattle, hogs and sheep, from \$758,520 to \$700,338, or by \$58,182, a total of \$41,315,302, making the aggregate loss for the six classes equal \$25,015,408. In this connection it may be interesting to note that since November 1 the value of merchandise exports has been decreasing each month. In the first four months of the present fiscal year there was, compared with the like period in the preceding fiscal year, an increase of \$67,959,471. In the last five months of the nine there was a decrease of \$92,974,879. The aggregate value of exports in the first four months of the fiscal year was \$40,498,603 greater than the value in the last four months of that period.

PROSPERITY OF THE SOUTH.

PRESIDENT C. H. MARKHAM of the Illinois Central Railroad Co. has returned to Chicago from a trip to Savannah in relation to the Central of Georgia Railway, which the Illinois Central controls, and his remarks after reaching home are worthy of attention. Some of his salient comments upon the South are that if the next cotton season brings a crop and prices equal to those of this season, no part of the country will surpass it in business conditions; that as a result of unusual returns to planters from last year's crop there is more money in the South than for years; that he found prosperity general, and several conferences with chambers of commerce developed reports of conditions which were exceptional; also that farmers are raising more grain and hay.

It will be observed that President Markham's expressions emphasize the fact that the South's business rests upon the best kind of a foundation—its crops. Hence it remains comfortable and generally at ease while other sections may be more or less troubled by circumstances which have little or no influence upon the course of affairs within its boundaries. The inclination to diversify in agricultural effort is furthermore a sign that this independence will become more stable than it has been because everything will not hang upon the success or failure of the cotton crop. This is the result of education through experiment stations and by other methods which have revealed to farmers the way to broaden and extend their work advantageously to themselves as well as to their respective localities. Moreover,

the efforts to obtain greater yields per acre are showing results, so that with diversification there will not be any lessening of the yields of the great staple, but it and all other crops will grow in magnitude and quality.

BRIQUETS FROM SAWDUST.

TWO firms in British Columbia have been experimenting, with some degree of success, in the manufacture of briquets from sawdust and other refuse of the lumber industry. In the manufacture, tar, pitch or petroleum waste is used as a binder, and coal slack or clay as a filler. The briquet completed contains about 65 per cent. of wood refuse, 25 per cent. of coal and 10 per cent. of binder, and a ton of briquets weighs about one-third less than an equal quantity of coal. It has been demonstrated, according to the Daily Consular and Trade Reports, that the briquets can be made at a cost of \$3 a ton, including depreciation of plant, interest on capital invested, insurance, etc. British Columbia is cutting about 1,350,000,000 feet of lumber annually, less than one-fifteenth the annual cut of the South, and it is estimated that the refuse from the lumbering operations may be worth \$1,400,000 in the shape of briquets. Upon that basis the waste of Southern lumbering might have a potential value of quite \$15,000,000 a year. To be sure, what was once held to be fit only for the fire is becoming recognized more and more as material for paper pulp, or as a source of alcohol, acetic acid, tar, turpentine, pitch and several heavy oils of value in the arts. Moreover, the abundance of natural fuels in the shape of coal, petroleum, natural gas, lignite, peat and the energy possible in hydro-electric developments have worked to delay attention being given to the subject of sawdust as the basis for fuel briquets, although there have been experiments along that line. But it is a subject worth studying. Nature is sinned against whenever any of Nature's products is allowed to be wasted by man.

PARR SHOALS POWER.

Hydro-Electric Development in Broad River Nearing Completion.

The South Carolina Development Co. is bringing to near completion for the Parr Shoals Power Co. a hydro-electric plant which was begun July 1, 1912, at Parr Shoals in the Broad River, less than 30 miles from Columbia, S. C. The dam of solid cyclopean concrete has an average height of 37 feet above rock bed, with a spillway 2000 feet long. It contains six 7x9-foot waste gates. The power-house of reinforced concrete substructure and of brick and steel superstructure is 300 feet long and 52 feet wide, with provision for eight main units and two exciters, five main units and exciter units being the primary installation. In the construction 111,000 barrels of cement furnished by the Clinchfield Portland Cement Co. were used. The hydraulic apparatus is furnished by the Allis-Chalmers Company of Milwaukee, Wis., and the same company furnishes the electrical equipment, with the exception of the switchboard, furnished by the Westinghouse Electric & Manufacturing Co. The engineering and construction of the plant were by the J. G. White Engineering Co.; the Columbia Railway, Gas & Electric Co. is to operate the plant, from which 28,000 shaft horse-power is to be transmitted by 27 miles of double circuit lines on steel towers.

For St. Augustine's Future.

The Chamber of Commerce of St. Augustine, Fla., Gen. J. Clifford R. Foster, chairman, and James O. Stevenson, secretary, has adopted a resolution looking to the development of a civic plan for future public improvements and development by the best and highest authority upon city planning which is available and obtainable in connection with the rebuilding of the area recently burned.

The Moss Point Advertiser of Moss Point, Miss., printed its issue of April 17 on paper made at the newly-erected plant at Laine of the Southern Paper Co.

BRIQUETS FROM SAWDUST.*

Experiments in Manufacture in British Columbia Lumbering.

The disposition and profitable utilization of the by-products or refuse from sawmills is a question that is receiving the serious consideration of individuals and companies operating the mills on the Pacific coast. The production of lumber and shingles constitutes one of the principal industries of British Columbia, but on account of the extensive tracts of timber land and the increasing demand for lumber and shingles, it has not yet reached the magnitude to which it promises to attain.

The increasing number of large sawmills, the growing importance of the lumber interests, and the thousands of tons of by-products or refuse in the way of sawdust, splinters, bark, slabs and small cuttings that are constantly accumulating at the mills make the utilization of this waste material a matter of importance to the lumber and shingle manufacturers.

The demand for a cheap fuel in convenient form, one that will produce less ash and cinder than coal, has encouraged experiments in the utilization of the by-product of the mills, especially of sawdust in compressed form. Most of the mills now use the sawdust from their plants in the furnaces for the production of steam power, and in some instances for generating electricity.

The conversion of the refuse into fuel possessing greater heat-producing power than the sawdust in its original form promises to develop a profitable industry. It will also lessen the cost of operating the mills by disposing of the by-product that now constitutes an item of considerable expense. The average loss is about 20 per cent. of the cut in the manufacture of lumber, and in the Armstrong-Kerr process sufficient residue is obtained from the cutting of 1000 feet of lumber to make one ton of briquets.

The approximate cut of the 220 sawmills, large and small, in British Columbia is 1,350,000,000 feet of lumber annually. The estimated waste from the cut of 1000 feet of lumber is 350 pounds of sawdust, making a total annual residue from the mills in the Province of 236,250 tons. If this waste material were converted into briquets at a market value of 6 per ton, the total value would be \$1,417,500.

To meet the demand for the utilization of this waste material, two companies are conducting experiments in the manufacture of briquets. One has a plant in Victoria that is now turning out a considerable quantity of the new fuel, and the other is constructing a briquet factory in Vancouver for one of the largest lumber companies.

The process employed in the plant at Victoria is described as follows: The bark, slabs, shavings, sawdust and other portions of the wood refuse from the sawmills is first passed through a "hog," or edging machine, in which it is cut into pieces not more than three-fourths inch long. The material is then passed into a shredder, where it is reduced to fine particles from the thickness of a match up to a quarter of an inch. From the shredder it passes into a drykiln, where it is thoroughly dried, as green particles of wood will not adhere and remain in form, no matter how great the pressure may be. From the drier it goes to the heavy compress machine, where it is passed into briquets, or rolls, three inches in diameter, held together with a seven-ply tarred jute string, the only bond used in the briquets.

The cost of production, including depreciation, interest on capital, insurance, etc., is estimated at \$3 per ton. The selling price will be governed by the price of coal, as the new fuel will be a competitor of coal for domestic use. The manufacturers claim that the briquets as a grate fuel and for cooking purposes, especially for baking, are superior to either wood or coal, as it is more combustible than the latter and leaves less ash and residue than either.

From scientific tests made by experts, the fuel is said to contain 8614 B. T. U. to the pound, and the ash amounts to 2½ per cent. The company claims that from experiments made recently no ash or residue resulted from the burning of their product, either in a grate, stove or furnace. It is also claimed that it requires less air to insure good combustion than other fuels, especially coal, and that it does not disintegrate in the process of burning. The plant at Victoria is equipped with three machines with a daily capacity of

seven tons each. The fuel can be manufactured and delivered within a mile of the factory at a cost of \$3 per ton, which is much less than the cheapest grades of Pacific coast coal.

The briquets manufactured by one company are made from sawdust and other by-products of the mills, to which is added tar, pitch, petroleum refuse or similar substances of an adhesive nature, in sufficient quantities to bind or hold together the principal ingredient. The filler is coal, yellow clay or other substances, the quantity or proportion depending upon the quality of sawdust used. The cheapest quality of soft coal dust, or slack, including a considerable percentage of dirt and ash, may be used to advantage. The composition of the briquets is as follows: Wood refuse, 65 per cent.; coal, 25 per cent.; pitch tar or oil, 10 per cent. The weight is one-third less than that of an equal bulk of coal.

The sawdust produced in the cutting of lumber on the Pacific coast is not really dust, but flakes. Cut from softwood with saws especially made for the timber, the residue is soft, spongy and resilient, and in the raw state is difficult to compress, whereas the sawdust obtainable at the mills in the Eastern States, eastern Canada and in Europe is from heavier wood, is granular in form, and is more easily compressed, requires less preparation and a smaller proportion of binding material, and is consequently less expensive to manufacture.

To convert the refuse of the British Columbia mills into briquets it is necessary first to pass it through a shredder, and then through a pulverizer to reduce it to a consistency from which it can be pressed into proper form.

The machinery required in the manufacture of briquets depends on the material utilized and the preliminary preparation necessary, such as pulverizing, drying, etc. The machines used in one process, designed and built especially for the purpose, are capable of a wide range of adjustment, with a maximum pressure of 10,000 pounds to the square inch. The cost of a compressing machine, with an average capacity of 11,000 briquets per hour, is from \$12,000 to \$14,000. The preparatory machinery consists of special forms of grinders, pulverizers, amalgamators and mixers. The raw material is measured and weighed automatically, and carried to the various parts of the plant by elevators and conveyors automatically operated.

NATIONAL DRAINAGE CONGRESS.

Various Phases of Land Reclamation to Be Discussed at Savannah.

Formal papers on the program of the National Drainage Congress at Savannah, Ga., this week are:

"River Regulation and Control in Antiquity," by Sir William Willcocks, K. G. M., Gezrah, Cairo, Egypt.

"Relation of the Citizen to Land Reclamation," by Congressman John H. Small of North Carolina.

"Land Drainage in Its Relation to General Agricultural Improvement," by Prof. Elmer O. Pippin, department of soil technology, Cornell University, Ithaca, N. Y.

"Reclamation and Diversified Farming," by P. G. Holden, director agricultural extension department, International Harvester Co. of Chicago, Ill.

"The Relation of Drainage to the Prevalence of Malaria," by Dr. Frank Hancock, Norfolk, Va.

"Malaria Investigations in the United States by the United States Public Health Service," by Dr. R. H. Von Ezdorf, Mobile, Ala.

"In Eradicating Mosquitoes What Shall We Do With Our Large Swamps?" by Dr. Isaac W. Brewer, Taughannock Falls, N. Y.

"Drainage in Its Influence on the Commercial Development of the South," by Dr. Clarence J. Owens, Washington, D. C.

"Control of Mississippi Floods Essential to Protection of Our Largest Drainage Unit," by United States Senator Jos. E. Ransdell of Louisiana.

"What Drainage Reclamation Has Done for the State of Missouri," by J. H. Nolen, commissioner of reclamation, Jefferson City, Mo.

"The Necessity of Drainage Legislation," by Congressman James T. Lloyd of Missouri.

"Certain Fundamental Factors in Drainage," by N. C. Grover, chief hydraulic engineer, United States Geological Survey, Washington, D. C.

"The Drainage Problem in Georgia," by Dr. S. W. McCallie, State geologist, Atlanta, Ga.

"Relation of Drainage to the Public Highway Problem," by Chas. H. Davis of Cambridge, Mass., president National Highway Association.

"Work of the Pittsburgh Flood Commission," by Morris Knowles, Pittsburgh, Pa.

"Reclamation, an Obligation of the Government," by W. S. Jennings of Jacksonville, Fla., former Governor of the State of Florida.

"Drainage Reclamation in the West," by R. A. Hart, United States supervising drainage engineer of the Western field, Salt Lake, Utah.

"The Use of Dynamite in Drainage Reclamation," by Dr. J. H. Squires of Wilmington, Del., agronomist, Dupont Powder Co.

"Drainage Reclamation in Georgia," by J. V. Phillips, United States drainage engineer in charge, Savannah, Ga.

"Modern Mechanical Equipment for Reclamation Undertakings," by Frank B. Knight, Lidgerwood Manufacturing Co., Chicago, Ill.

"Reclaiming Atlantic Coastal plain," by F. G. Eason, United States engineer in charge, Charleston, S. C.

"Flood Regulation in California," by A. L. Cowell, the river regulation commission of Stockton, Cal.

Other addresses on the program are by Secretary of the Interior Franklin K. Lane, Governor J. M. Slaton of Georgia, R. J. Davant, chairman Savannah board of control; Edmund T. Perkins of Chicago, president of the National Drainage Congress; Speaker Champ Clark, United States Senators E. D. Smith of South Carolina and F. M. Simmons of North Carolina, Congressmen Charles G. Edwards of Georgia, Henry T. Rainey of Illinois and J. W. Ragsdale of South Carolina; President B. F. Bush of the Missouri Pacific Railway, St. Louis; Dr. Henry Lockhart of Coalmont, Tenn.; Dr. W. S. Rankin of Raleigh, N. C., and William H. Deaderick of Hot Springs, Ark.

Pyrite and Sulphuric Acid in 1913.

The production of pyrite in the United States in 1913, according to W. C. Phalen of the United States Geological Survey, was 341,338 long tons, valued at \$1,286,084. For 1912 the output amounted to 350,928 long tons, valued at \$1,334,259, a decrease for 1913 in quantity of 9590 long tons and in value of \$48,175. The production in the leading States—Virginia and New York—diminished slightly; in California there was an increased production, and in Wisconsin the output also continued to increase. The output of by-product pyrite, obtained in connection with coal mining, fell off materially.

The imports of pyrite for consumption during the calendar year 1913 were 850,592 long tons, valued at \$3,611,137. These figures show a notable decrease in quantity, 120,193 long tons, and in value, \$230,546, as compared with the imports in 1912, which amounted to 970,785 long tons, valued at \$3,841,683.

According to actual returns for the year 1913 the production of sulphuric acid in the United States was 3,538,980 short tons of 50° acid, valued at \$22,366,482. This output does not include a small amount of fuming acid, but does include by-product acid—that is, acid obtained in the smelter industry. The acid produced at copper and zinc smelters in 1913 amounted to 790,296 short tons of 50° acid, valued at \$4,346,272. The production of acid by grades is tabulated in detail below:

Production of Sulphuric Acid in the United States in 1913, by Grades, in Short Tons.

Grade.	Quantity.	Value.	Price per ton.
50° Baumé.....	1,643,318	\$9,212,917	\$5 61
60° Baumé.....	509,929	3,202,528	6 28
66° Baumé.....	797,104	9,282,422	11 65
Other grades.....	63,158	986,659	15 62
Total.....	3,013,509	\$22,684,526	\$7 53
Total reduced to 50° Baumé acid*.....	3,538,980	\$22,366,482	\$6 32
*Exclusive of a small amount of fuming acid.			

The year 1913 is the third for which the Survey has collected statistical information on the sulphuric-acid industry in the United States. The Survey's figures are not estimates, but are compiled from first-hand information received from the producers themselves, and cannot exceed actual production.

The above figures are final so far as the Survey's present information goes, but they are subject to change, if necessary, when the printed report is issued. The changes, if any are made, will probably be slight.

*United States Consul-General R. E. Mansfield at Vancouver in Daily Consular and Trade Reports.

New Orleans' Vast Port Improvements

[Special Correspondence Manufacturers Record.]

New Orleans, La., April 18.

Such broad-gauged plans for the really comprehensive development of port facilities at New Orleans as are now being energetically whipped into shape cannot fail to operate most powerfully in the direction of bringing to New Orleans all the prestige and the prominence her river and her location pre-eminently entitle her to enjoy. When these plans are fully worked out, New Orleans will have terminals for inland water craft and ocean liners inferior in kind to none in the world, for, along with altogether modern warehouses, there will be loading and unloading devices in accordance with the best developments to be found, and also the costs will compete with the lowest any port can offer anywhere.

The initial development is to be a big and notable one, involving the expenditure of \$3,000,000 for warehouses and terminals for cotton alone, and this work will be carried out as rapidly as conditions will allow. But on top of this, and as fast as they can be properly and judiciously employed, other millions, to exactly the extent that commerce will require, will be spent on warehouses and terminal facilities for every kind of business that the port attracts. The Board of Port Commissioners has a free hand, and five, ten, or even more of millions of dollars can be used whenever there is sufficient justification for their expenditure to warrant a bond issue that investors will take up.

The remarkable success in the flotation of the initial issue of \$3,000,000 of bonds opens this wide vista to everybody's view. The issue is authorized by a constitutional amendment overwhelmingly carried in 1910, and practically permitting the State of Louisiana to engage in the construction and operation of warehouses and terminal facilities in New Orleans. A prior constitutional amendment adopted in 1908 permitted the issuance of \$3,500,000 of bonds for the construction of new "wharves, sheds, landings and appurtenances thereof, and maintaining the same for the development of the commerce of the State of Louisiana and the city of New Orleans," and empowered the Board of Commissioners of the Port of New Orleans, appointed by the Governor, to serve at will, to do the work and carry out a contract by which the State of Louisiana pledged the payment of the bonds. The board was empowered to expropriate lands required, and all revenues from wharves and warehouses then existing are to be established under the provisions of the 1908 amendment were to be pledged for the payment of the bonds. Bearing interest at 5 per cent., and required to bring par and accrued interest, the entire issue of \$3,500,000 was sold at a premium of \$23,500, and the bonds now are quoted at \$109.

This entire amount has been expended or contracted for in the acquisition of land and the construction of some four miles of steel sheds, the taking over and development of five miles of wharves and over two miles of roadways and approaches, and so far as they go, and especially in contrast with former port facilities, the publicly-owned wharves and sheds of New Orleans are vastly ahead of those to be found in other cities of the South. During the 10 years between 1902 and 1912 the commission's port receipts increased from \$215,329.19 to \$429,996.74, giving such assurances that future surplus revenues would so certainly take care of interest and principal that the present price of the bonds shows a premium of \$315,000.

Nevertheless, it was foreseen that the requirements of commerce here, with the opening of the Panama Canal, would call for the construction of port facilities much greater and better equipped than any provided for heretofore, and especially was there immediate need of a warehouse for the economical and expeditious handling and storing of cotton. A new amendment was required, and the one prepared and carried in November, 1910, authorized the port commissioners to do practically anything along the 41 miles of river front within its jurisdiction which was deemed necessary or desirable for the development of the commerce of the port. In addition to expropriating land, building new sheds, installing facilities, constructing roadways, approaches, etc., it was authorized to build warehouses and issue receipts, greatly enlarging the scope of operations as provided in the 1908 amendment, with the specific purpose of immediately constructing a cotton warehouse for not only receiving and shipping cotton, but storing it as well. A recent Supreme Court decision has declared that the commission has plenary powers and rights on

the river front, and that no private ownership can be interposed against its needs of space for the commerce of the port, so, with its powers fully defined, the newly-constituted board is vigorously proceeding to carry out the provisions of the law.

Under an ordinance of this board \$3,000,000 of 5 per cent. bonds were issued, under date of January 1, 1914, and payable at any time between July 1, 1934, and July 1, 1964. The bonds are secured by liens on property and buildings of the board, and in every way made absolutely secure. Interest and principal are to be paid out of the net receipts of warehouses and buildings, it being required that charges shall be sufficient to provide the necessary funds. The bonds are exempt from taxes of all kinds.

Having been favorably passed on by the foremost bond attorneys of the land, the entire issue was underwritten some weeks ago by a local syndicate, at par and accrued interest, as required by law. The underwriters then offered the bonds to dealers in New York and elsewhere, and the gratifying and significant word has just been received that the issue was oversubscribed two and a half times. Work on the new publicly-owned cotton warehouse will now proceed without delay.

A contract has been closed with Ford, Bacon & Davis, New Orleans, New York and San Francisco, for engineering and supervision. They are sending one of their experts to Europe and are gathering data from everywhere in the United States. The subject of warehouses and terminals will be exhaustively and authoritatively threshed out, but it is stipulated that a report must be in hand within six months' time.

A tentative plan for eight-story units was prepared for the previous board by J. F. Coleman, then engineer for the board. This and all other suggestions will be carefully considered by the present board. A location has been adopted along the river front, 3000 feet in length, between Napoleon avenue and Soniat street, with a depth of 1100 feet. It is proposed to pump in and fill the entire area to depth of seven or eight feet, bringing the height well above the crest of the present levees at that place. It is considered more than likely that the board will have to acquire some 60 acres additional for yardage room. This would give 25 to 30 miles of trackage, which, it is figured, will be required. It is proposed to utilize to the utmost the benefits which are possible to be secured through connections with the municipally-owned belt railroad. This means that the warehouses can be served by the cars of every railroad entering New Orleans.

The warehouses will have every known device for the economical and expeditious handling of cotton and general merchandise as well. Lighter barges will be introduced. Traveling cranes along the river front, with railroad tracks between the ship and the warehouse, so that cargoes may be loaded or unloaded from ship to car, car to warehouse or ship to warehouse, and vice versa, in any combination required, as is universal in modern European ports, and also automatic and mechanical traveling loaders and unloaders between ship and

shore, are some of the terminal facilities to be installed, and the warehouses themselves will be equipped with hoists, traveling cranes and everything that gives superior facilities to a port. As the buildings will be of fireproof construction, the lowest possible insurance rate will be secured. Also, because of freedom from all taxes—State, city, district and levee—this publicly-owned warehouse will be in a position to give a storage rate lower than any port in the world. As the capacity of all the present large sheds is insufficient for the storage of anywhere near all the freight now offered, it is manifest that there must be a vast increase in the business of the port when the new sheds and warehouses are installed, with every modern convenience and at the lowest possible rates.

The exceedingly favorable conditions surrounding the marketing of the present issue of bonds and the seeming certainty that the earning power of the new "plant" will be such as to shortly put the price of the bonds above par, give the board confidence that other issues will be taken as fast as they may be required. The board thus has in contemplation a lumber dock, with terminals and storage warehouses; also coffee warehouses, and any others which would be utilized to an extent that would justify their cost. Broadening the present docks and completing highways throughout the territory tributary to the docks are other improvements that will be made. The board is also experimenting with various loading and unloading devices that may be used in handling every kind of cargo that passes through the port. Manifestly, with all these improvements once installed, and with unlimited future improvements assured as fast as they are required, development of the port of New Orleans must receive an impetus such as she has never known before.

All these developments are assured. Having plenary powers, and being restricted in their operations only by the practicability of their propositions, the board has in mind a movement to connect the old Basin Canal with the Mississippi River, now only six blocks away. The old Basin Canal is an extension of Bayou St. John, which enters Lake Pontchartrain. It is an ancient waterway, up which Bienville sailed when he founded the town, and it has always been a traveled stream. Deepened and widened and connected by locks with the Mississippi, it would not only afford an opportunity for a vastly increased water-borne traffic, but for thousands of feet along its course there would be available sites for factories, which could be served by boat and rail, and the construction of slips would almost indefinitely add to the dock room to be had, with the possibility of spur tracks on every side.

One feature of the situation must be noted to round the story out. The board serves without salary of any sort, and regards the honor of the service glory enough for all. It is composed of prominent, successful business men, who are managing the public's affairs as energetically and as faithfully as their own. They have been in office barely eight months now. They have held an average of 10 meetings a month, and have made things hum. Robert G. Guerrard, president; A. M. Lockett, vice-president; Ernest M. Loeb, chairman of the finance committee; A. Van Benthuyzen, secretary, and Edward Alois, are their names.

ALBERT PHENIX

Eastern Kentucky Coal Fields

INDUSTRIAL AND COMMERCIAL DEVELOPMENTS IN THE VALLEY OF THE BIG SANDY.

[Special Correspondence Manufacturers Record.]

Jenkins, Ky., April 17.

There is a great business and commercial awakening throughout the Big Sandy coal fields, comprising mainly the region of the Levisa Fork and its tributaries, the counties of Johnson, Floyd and Pike, the center of the big commercial and industrial awakening being Pike county, the largest in the State, its area being over 1100 square miles. The upper Big Sandy Valley was penetrated several years ago by the Chesapeake & Ohio Railroad, but not only recent years have coal developments reached their activity. During the past two years numerous short-line branches have been extended out into extensive coal beds as well as almost untouched forests, while along the old line new cities and new coal and lumber enterprises have sprung into existence; established towns, county-seats, etc., have also increased wonderfully along all lines of commercial importance.

First, perhaps, in importance, of the new cities that

have grown up so rapidly is Jenkins, with a rapidly increasing population of between 4000 and 5000 people, the seat of the extensive coal and industrial development work of the Consolidation Coal Co. at the headwaters of Elkhorn Creek, a tributary of the Big Sandy, immediately beyond the Pike line in Letcher county, reached by the Sandy Valley & Elkhorn, owned by the Baltimore & Ohio. Less than three years ago when the first tree was felled on Elkhorn Creek, where now stands the city of Jenkins, that section was practically a forest, with only an occasional farmhouse, where moonshining, marauding and murder flourished. Promoters of the city came and set themselves to work against what seemed to be impregnable barriers. They were 30 miles from a railroad line and twice as far from a telegraph office, with almost impassable roads. It was a gigantic task, but John G. Smyth, a prince of sturdy, resolute manhood, came and blazed the trail and helped to lay the foundation for one of the biggest

development enterprises in the South. Smyth was manager of the Elkhorn division of the company. He had gained a wide experience in the West Virginia and Pennsylvania fields, where he was prominently identified with the operations of the Consolidation Coal Co., and was chosen to superintend and manage the new territory. For weeks Smyth and his men toiled against the disadvantages, but at length the barriers began to disappear and the fruits of their efforts came forth. Before the outside world knew there was an Elkhorn Creek in Kentucky a city of nearly 2000 people had sprang up—a city of splendid streets, good buildings, business blocks, machine shops, supply houses, telephone exchange, electric lights, water-works, a national bank, big sawmills, a 50,000-capacity brick plant, a postoffice, churches, a splendid central school building—in fact, every modern convenience. Today Jenkins has a \$40,000 public school building, a \$50,000 bank and office building, offices of the Consolidation Coal Co., a \$50,000 city hospital, a \$50,000 Y. M. C. A. building, a \$50,000 central store, a \$50,000 building in which is the postoffice, a police exchange, a lodge hall, the big central power station which cost over a million, besides numerous other buildings good enough for a city of 20,000. The residence homes of the officials are beautiful—built around Lakeside, noted for its picturesque scenery, on the benches of Cumberland Mountain, where a 12-acre lake has been made by building a concrete dam across a fork of main Elkhorn. Higher up in Cumberland Mountain is Goodwater reservoir, built at a considerable cost, from which ice-cold water is furnished every home in Jenkins.

The homes of miners are good buildings, among the best in the country, which shows that the Consolidation offers inducements for mining men to come among them. It has also spent several million dollars largely for the convenience and pleasure of its laborers. The churches and schools of the city are well governed.

Pikeville, the county-seat of Pike county, is an old town, and previous to a few years ago was of little consequence except as a shipping point for a large territory in Eastern Kentucky, being at the head of slackwater navigation on the Big Sandy. Four or five years ago there was a better spirit manifest and Pikeville began to grow. The same spirit that imbued the rapidly developing industrial South made its impress on Pikeville. The men behind the push knew there were abundant resources surrounding the town—virgin fields of practically all kinds of hardwood and mountains of coal. Pikeville has good banking institutions, all in a sound, healthy condition, ably and prudently managed. Pikeville's banking institutions, so far, have been one of the most potent agencies in building up the trade and industries of the picturesque little city. In educational facilities Pikeville is thoroughly abreast of the times. The public schools are provided in adequate numbers with a competent number of instructors, and

there is also located here one of the best colleges in the State, this the Pikeville Collegiate Institute, in which hundreds of students are enrolled annually. The city has a number of manufacturing and woodworking plants of importance, machine shops, repair shops, wagon and buggy manufactories, big stores, both wholesale and retail, all doing a good business. Enterprise and development are everywhere evidenced, and the growth and progress of Pikeville will continue until she is destined to be one of the best trade centers in the entire Big Sandy Valley. A number of big coal developments are in progress around the city, which have materially increased its population and business interests. Within the past two years its population has increased over 100 per cent., and with the tide of immigration coming into the great coal fields on every side of the city, some in close proximity, Pikeville, it is safe to predict, will double within the next 12 months. Through the efforts of Congressman John W. Langley city mail delivery has been established and will become effective at once.

Pikeville offers inducements to more woodworking plants, coal industries and the like, as the extensive forests surrounding and the giant coal beds on every hand would make it an ideal site for such industries. A retail lumber yard would net splendid returns. Among Pikeville's present industries are the Pikeville Wholesale Grocery Co., Big Sandy Furniture & Supply Co., the Pikeville Clothing Co., the First National Bank, Pikeville National Bank, Call Bros. Hardware Co., Eastern Kentucky Home Telephone Co. (both local and long distance), Pikeville Ice Co., Eastern Kentucky Music Co., Builders' Supply Co., Seagraves Machinery Co., T. M. Peery Wagon Shop, Pikeville Bottling Co.

Briefly speaking, Pikeville is just beginning to grow along safe, conservative lines, and there are many rare opportunities awaiting the men who join in its development and growth. Anything would thrive here, from a hosiery mill to a furniture factory, or from a pin factory to an organ or piano factory. The location would be an ideal one.

Prestonsburg and Paintsville are both thriving, growing cities of the present day, the former in Floyd county and the latter in Johnson county, both on the main line of the Big Sandy branch of the Chesapeake & Ohio Railroad. Prestonsburg has numerous coal mines and tracts of extensive hardwood fields surrounding in close proximity. The Elkhorn Fuel Co. is starting a gigantic coal operation at Wayland, on Beaver Creek, not far from Prestonsburg, and is employing an army of men. Prestonsburg has for years been an important residence city, but with the vast development surrounding is today a business center of note, a large number of business blocks having been built during the past 12 months.

Paintsville, the home of multi-millionaire John C. C.

Mayo, now seriously ill in a Cincinnati hospital, is in a splendid agricultural region, while coal and timber fields abound. A few miles out on a branch line of road is Van Lear, an "overnight" city of the Consolidation Coal Co., where it has an extensive operation, second to its Jenkins-McRoberts plants. Numerous other coal operations are in close proximity to Paintsville, and the town has made a remarkably rapid growth within the past few years. The city has woodworking plants, repair and machine shops, wholesale houses, retail lumber yards, electric lights, water-works, fine telephone system (both local and long distance), fine banking institutions, safe and conservative; splendid streets, business blocks, etc. Paintsville is recognized as one of the nicest residence cities of the Big Sandy Valley. The visitor here is attracted by the swell, new \$50,000 residence of John C. C. Mayo. Mr. Mayo has always retained a pride in Paintsville, his home town, having contributed to its churches, schools and colleges, giving lavishly of his wealth. He has donated to every good and worthy enterprise launched in the town, always working to its ultimate success. Twenty years or more ago when the wealth of Eastern Kentucky was comparatively unknown Mr. Mayo was a country school teacher at a small salary. He had a strong foresight, saw the wealth of the mountains, and began to invest his hard-earned savings in Eastern Kentucky coal lands, making Paintsville his headquarters. When he began to turn his holdings, Mayo's wealth began to pile up. He branched out, purchased largely, was a frequent visitor to rich New York, and got others interested. It is through his untiring efforts that Eastern Kentucky is today reaping inestimable benefits from her extensive coal and timber fields, being rapidly developed.

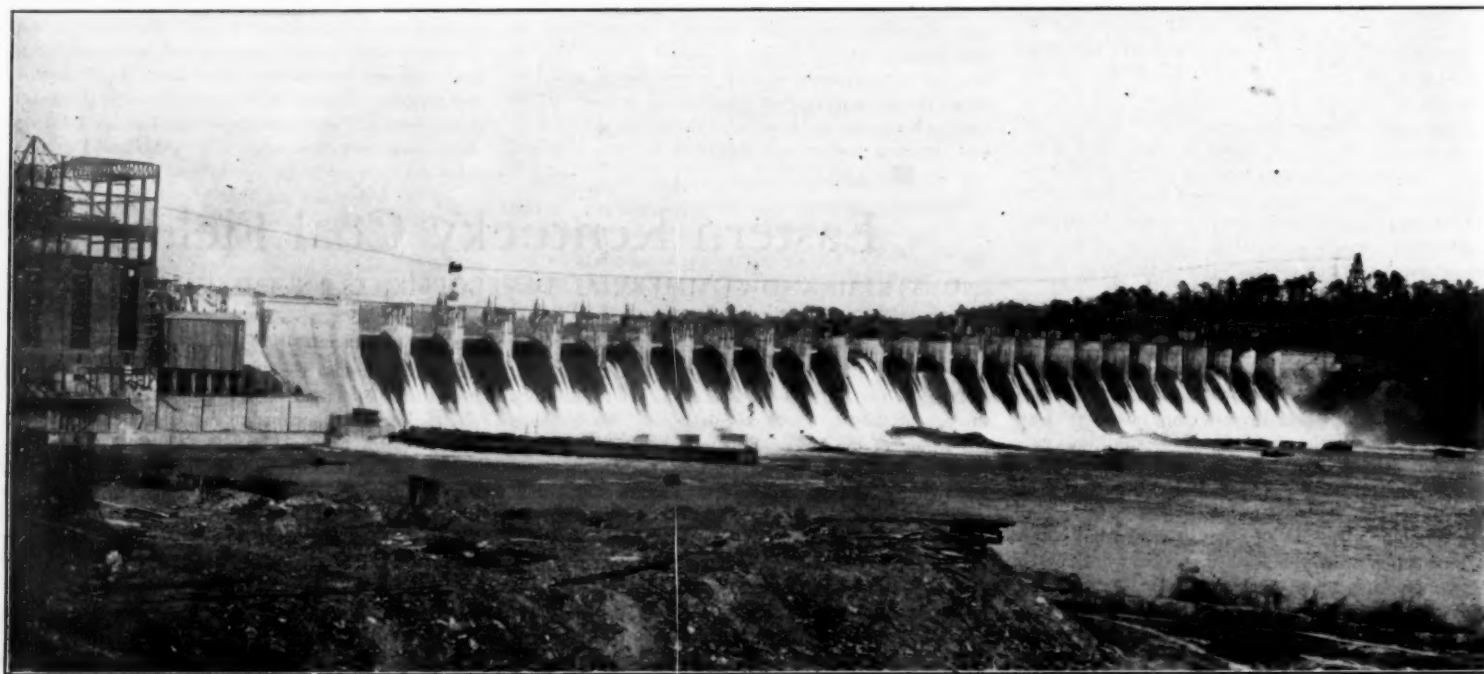
W. B. WERN.

Concrete Stalls and Iron Work.

R. K. Stewart & Son, South Boston, Va., have awarded contract to Hodges & De Jarnette for constructing a two-story 319x165-foot building, first floor to contain 400 stalls for horses. Mill construction, fireproof stalls and sprinkler system have been decided upon, the building to cost about \$48,000. Stewart & Son want prices on fireproof concrete construction for the stalls and prices on iron work for the whole building.

Inter-State Oil & Fertilizer Co.

Inter-State Oil & Fertilizer Co., Birmingham, Ala., will build a cotton-oil mill and fertilizer factory at Odenville, to cost about \$30,000; an oil mill and fertilizer factory at Collinsville, to cost \$50,000; an oil mill at Cullman to cost \$25,000, and plans to establish three other mills in time to crush this year's crop.



GENERAL VIEW OF ALABAMA POWER CO.'S POWER-HOUSE AND DAM AT LOCK NO. 12, COOSA RIVER.

The first of the four 17,500 horse-power generating units of the hydro-electric plant of the Alabama Power Co. at lock 12, on the Coosa River, has been placed in operation. The dam shown here is of the gravity type, and made of cyclopean concrete. It is nearly 1500 feet long, and 80 feet high. The large power-house constituting part of it reaches out into the river 324 feet, and has a width of 80 feet. In the construction of the dam were used 210,000 barrels of cement, 100,000 cubic yards of sand, 25,000 cubic yards of gravel and 130,000 cubic yards of stone. Detailed description of this development was given in the MANUFACTURERS RECORD of April 16.

Forestry and Water Resources*

By HENRY S. GRAVES, Forester of the

The South today is standing on the threshold of a vast industrial development. The extent of this development, and consequently the advancement and prosperity of the South itself, depend very largely on two factors—the production of raw material from the farms, forests and mines, and the protection and development of water resources. The South is pre-eminently favored in both these respects. It is not merely the great amount of navigable waters stretching far back into the different States, available for cheap transportation, but vast water-powers which are rapidly transforming the South into a manufacturing as well as an agricultural section.

The development of the greatest usefulness of these water-powers is most intimately bound up with the preservation and protection of the forests at the headwaters of the streams. Of the total estimated potential water-power in the United States (36,900,000 horse-power), 11 per cent. is found in the Southern Appalachians. In North Carolina, South Carolina and Georgia alone there are about 1,321,000 potential horse-power, of which so far only 32 per cent., or 429,000, are actually developed and are being utilized.

In the Southern mountains there is one factor that far overshadows all others. The danger from erosion is peculiarly great in the Southern Appalachians, because the region has a very heavy rainfall, and as soon as the soil becomes exposed it erodes quickly and violently. Furthermore, the ground in this region is bare of snow during all of the year except a few weeks in winter, and is therefore subject to the action of water during practically the entire year.

Still another condition which tends to increase erosion in the Southern Appalachians is the extreme frost action. The ground freezes at night to the depth of an inch or so, and a layer of soil from one to one and a half inches is lifted from the surface by columns of ice. In the daytime the melting ice lets the surface earth back into place again. This process, constantly at work, allows the heavy rains to remove readily the loosened soil from the exposed slopes.

Because of the lack in the South of natural storage in lakes and marshes, the washing away of the soil from the mountains removes the only natural storage reservoir for the flood waters, and thereby decreases the amount of power that can be developed continuously throughout the year. Some of the Southern rivers, like the Roanoke, which rise in the mountain regions, have, as it is, extremes of high and low waters. This condition is due to the lack of natural storage basins, and these rivers would become entirely uncontrollable and practically useless for water-power development were the natural protective cover at the headwaters to be destroyed.

Indiscriminate timber cutting in the mountains; forest fires, which usually preceded, accompanied and followed lumbering, and, above all, the clearing of high mountain land for agriculture, followed by improper methods of cultivation—all these things together have brought about erosion in the mountains which already has produced evil consequences.

The soil washed from the mountain fields goes into the streams. The destruction of farm land in the valleys is enormous, especially during wet years. In 1901 the estimated damage by floods in the valleys of the rivers flowing from these mountains was \$10,000,000. The finer eroded material is carried down the stream and deposited where the current becomes checked, and especially in the reservoirs constructed for water-power use, where the water is quiet and therefore the silt most easily deposited. This fine silt is deposited also in the navigable portion of the stream. This necessitates constant dredging to keep the stream open for navigation.

The process of denudation of the mountain slopes already has seriously affected the capacity of the Southern streams for water-power development. One prominent Southern engineer has estimated this to be at least 40 per cent. Apart from the menace to the water-powers, the washing away of the soil from the mountains and from the fields in the Piedmont region is a very real danger to the water supply of the cities and towns both from the standpoint of quantity and quality. Fifteen years ago the streams in this region carried far less sand, silt, detritus and washings than now. These have been filling up the channels and increasing

National Department of Agriculture.

enormously the expense and difficulty of purification, so that many cities now face not only a shortage of water during the lengthy drought periods, but unknown dangers in the water which they do get. As an example, the city engineer of Augusta, Ga., stated in 1908 that their power canal had received more silt in the last 18 months than in all the 30 years previously. If this is the case with only a portion of the mountain slopes denuded, what will be the plight of Augusta and other cities similarly situated when the bulk of the forests is gone?

In the Carolinas and in Georgia alone over \$50,000,000 is now invested in cotton mills run by water-power directly or by electric power generated therefrom, and this is only the bare beginning in electrical development. The 2,000,000—or, as some claim, 3,000,000—horse-power available in the streams that flow from the Appalachians to the Atlantic, when developed, would mean an investment in hydro-electric plants of upwards of from \$200,000,000 to \$300,000,000, earning annually from \$40,000,000 to \$60,000,000 at a conservative estimate, and saving the South on its coal bill alone some \$15,000,000 to \$20,000,000.

Obviously, we do not advocate maintaining a forest cover on the entire watersheds of our rivers. Lands suitable to agriculture must be devoted to that purpose, but there should be better methods of farming which will prevent erosion and will utilize a larger amount of water through increased absorption of the soil and increased crop production. My plea for forestry is mainly in the mountain regions on those areas of no permanent value for farming and situated most critically for watershed protection.

The total forest area of the Carolinas and Georgia is estimated at present at 75,000,000 acres. North and South Carolina have each 19,000,000 acres, and Georgia 37,000,000 acres.

Not less than 30 per cent. of this area, or about 25,000,000 acres, should be permanently kept in forest for the protection of the streams that rise in the Appalachians. Of this protective forest 9,000,000 acres should be in North Carolina, 6,000,000 acres in South Carolina and 10,000,000 acres in Georgia. Within this area there are about 2,000,000 acres on critical watersheds that will be in need of reforestation.

Serious injury to the industrial development of the South can be prevented by adopting right measures now. The National Government has recognized the public character of the problem in an extensive purchase of forest lands on the headwaters of navigable rivers. The National Forest Reservation Commission has approved the purchase of 120,706 acres in North Carolina at a total cost of \$924,589, of 23,286 acres in South Carolina at a cost of \$128,157, and of 96,132 acres in Georgia at a cost of \$622,654. These Government forests, however, as you can readily see, will form only a very small portion of the forest area which must be protected. The work of Government purchase is confined to the protection of navigable rivers. A considerable number of States have made a beginning to meet this problem. No State is doing its full duty in forestry. The Federal Government is giving assistance to the different States in the work of fire protection on the watersheds of navigable streams. Approximately \$100,000 a year is expended in giving such assistance. It is a requirement, however, that no money can be expended for this purpose unless the State has established a system of fire protection and is appropriating for the actual work of protecting those lands an amount equal to what the Federal Government is prepared to allot. It has been the earnest wish of the Forest Service that more of the Southern States could secure advantage of this Government aid.

Without any question the problem of control of our water resources is one of the most important problems of internal development of the country. In many instances streams are becoming more irregular every year. In nearly every part of the country the use of water resources is becoming more and more intensive.

A good deal of work has already been done upon our rivers. One of the greatest needs today is that the different activities essential for permanent improvement of rivers be brought into correlation and be conducted in accordance with a comprehensive plan. There have been enthusiasts who have asserted that the protection of forests would be sufficient to control floods. In my opinion, those persons who assert that any one method will meet the situation are wrong. Conditions

necessarily vary, the needs of the different streams necessarily vary, but in any case a real control of stream flow can be secured only by a comprehensive plan which makes use of all the different influences which effect control of water, levees where these are necessary, reservoirs where these are necessary, the protection of forests at the headwaters of streams, etc.

It is as ridiculous for a forester to claim that reforestation alone would prevent floods and bring about improvement of the rivers as it is for an engineer to claim that levees and drainage by themselves can work permanent improvement in our rivers. The engineer and the forester must work hand in hand if our river system is to be converted from a source of danger and expense to one of the highest usefulness.

There are some engineers, and very prominent ones, in this country who claim that neither the construction of reservoirs nor reforestation can have any effect whatever upon the navigation of the river. They claim that navigation can be effectively regulated by channel improvement only. Yet history all over the world and experience in our own country shows how futile this method is to bring about permanent improvement in our rivers. Regulation of flood waters by channel improvement has been so far the only method used in the attempt to control our rivers, and the results speak for themselves. In the older countries it was found out many years ago that improvement of navigation near the mouth of the river is merely a temporary expedient. If permanent improvement is to be accomplished, work must begin up the stream, not down. Regulation must begin at the source. Floods must be prevented, not cured.

FOR MUNICIPAL DOCKS.

Comprehensive Plan for Palatka, on the St. John's River, in Florida.

[Special Correspondence Manufacturers Record.]

Palatka, Fla., April 16.

Palatka, one of the leading inland ports of Florida, is planning the erection of municipally-owned docks. The city is now negotiating preparatory to the purchasing of 600 feet frontage on the St. John's River, and on this land will be erected concrete docks, warehouses, railroad tracks and then space left for small industries to erect their plants and warehouses.

If these plans carry, Palatka city will have commodious and convenient docking facilities to be used by transient shipping interests at nominal cost. The Clyde Steamship Co., which daily runs a combined passenger and freight boat between Jacksonville, Palatka and Sanford, and the Beach & Miller Company, which furnishes steamer service between Jacksonville, Palatka and Crescent City, have practically a monopoly of all the docking space in Palatka at the present time. The new city docks will be even better, as concrete will be used, and they are to be located above the two railroad and county bridges, which will give the ships a larger radius of activity, whereas the regular steamship companies now dock their boats between the bridges.

The plans for the new docks call for the expenditure of about \$100,000, and it is probable that this amount will be raised by bond issue. The Palatka Board of Trade is fostering the project.

The actual work of constructing the first half of the trans-Florida canal has begun at a point below Palatka on the St. John's River, known as Welaka.

This is a gigantic engineering project, which will give Florida a direct water route through the middle of the State, and while the Government appropriated more than \$1,000,000 to be spent eventually, only \$730,000 is available for immediate use. The idea is to construct a deep waterway between the many lakes that dot lower Florida like so many mud spots on a new suit, from Welaka, on the St. John's River, to Leesburg, thence later on to Port Inglis, on the Gulf of Mexico. The work between Welaka and Leesburg will be finished before that on the last lap is started. Palatka is expecting many advantages to result from the construction of this canal, as is all Florida.

Palatka continues to grow both as a manufacturing and agricultural center, with its unequaled cypress lumber interest, its fertile farming section and its characteristic and wonderful climatic conditions, predictions are that Palatka will not only keep pace with its fast-growing Commonwealth, but outpace it in many ways.

ROY G. BOOKER.

*From an address before the Tri-State Water and Light Association of the Carolinas and Georgia.

A Picturesque Highway in North Carolina Highlands

SUBDUING ROCKY NATURE.

Interesting Engineering in Building a North Carolina Mountain Road.

By A. SYLVESTER EDMONDS.

The mountain road now under course of construction between Tryon and Saluda, N. C., will, when completed, about May 15, form a most interesting link in the chain of highways connecting the mountain section of Western North Carolina, Tennessee and the country above with the lower South—South Carolina, Georgia and Florida. For the engineering feat it represents and the interest it will be to tourists this bit of road building merits comment.

The course lies from Tryon up through the Pacolet Valley into the Pacolet Gorge and along the precipitous sides of this to Saluda, which is nine miles distant, 1000 feet higher. With an average grade slightly greater than 2 per cent., the road in no place over the steepest mountain side reaches a grade of more than 6 per cent.

At a cost of \$500,000 for the nine miles and as high as \$175,000 to the mile in the most difficult portion, the road is being constructed 20 feet wide, well rounded, smoothed and subgraded. In many places a solid bed of rock is furnished by nature. Excellent drainage will be obtained by blasting out a few feet below the road level and filling in with crushed rock to within six inches of the surface, over which dirt will be placed. It is expected that the road will be graveled and covered with sand. In the short distance between Tryon and Saluda 13 bridges are necessary. All are to be of steel. The road tunnels the tracks of the Southern Railway 60 feet below the rails at one point. The railway company has provided a permanent concrete tunnel 160 feet long at an expense of \$20,000.

A short distance out of Tryon the road strikes directly up the beautiful Pacolet Valley. Here it runs straight and level. In a short distance the valley narrows, the sides close in, ever steeper and higher in ascending, till one finds himself in the heart of the mountain along the face of a sheer wall above the Pacolet River, plunging and eddying below. A stone's throw from the traveler the waters of Hemlock Falls tumble into the river from their brink high above.



HERE THE HIGHLAND HIGHWAY WAS CONSTRUCTED ALONG THE FACE OF A SHEER PRECIPICE.

Tourists have been prevented from motoring through this superb section largely by the impassability of the roads. That fear need no longer be entertained. The key has been turned in the lock of the mountains and their fastnesses thrown open.



WHERE WAY LEADS THROUGH SOLID ROCKS IN BUILDING A NORTH CAROLINA HIGHLAND HIGHWAY.

Piedmont Electro-Chemical Co.

Piedmont Electro-Chemical Co., Charlotte, N. C., incorporated last week with \$100,000 capital stock, has organized to build a plant at Mt. Holly, this being the company lately reported as to be organized by the Southern Power Co. of Charlotte. Officers have been elected as follows: President-treasurer, E. R. Bucher; secretary, D. C. Carmichael; manager, S. Sechenbleikner, all of Charlotte. This company will erect two buildings of wood construction, 250x80 feet and 150x80 feet, to be equipped with machinery for a daily capacity of 60 tons of 50 per cent. double phosphate. Its equipment will include grinding machinery for phosphate rock, electric furnaces, transformers, mixer and pumps, all partly purchased.

A \$200,000 Company Incorporated.

With a capital stock of \$200,000, the J. S. Morton Lumber & Timber Co. has been incorporated with \$200,000 capital stock by J. S. Morton of Macon, Ga.; George Thomas, D. J. Vail, F. B. Morton, Jr., and J. E. Harroh of Ohio. This company is reported as to build a hardwood and pine plant.

To Develop Virginia Ochre.

For the purpose of developing ochre, the Virginia Ochre and Color Mines of Hiwassee, Va., has been incorporated, with officers as follows: President, Herbert L. Baker; secretary, Duncan A. MacPhie; both of Boston, Mass.

Brick Pavements as an Investment*

By W. T. BLACKBURN of Paris, Ill.

The wording of this subject would imply that such an improvement gave titled interest in the public highway of special value to persons or property. The title of the highway is usually vested in the owners of the adjacent property, and only subject to an easement held by the public for the purpose implied in the purchase or condemnation, as the case might have been, and should the roadway cease to be used for that purpose, the control and title would revert back to the owners of the abutting property.

Wealth, or those things of value worthy of an investment, can only be obtained in their original elements from the development of the mineral or agricultural resources of the earth—the iron, coal, copper, gold and silver; the wheat, oats, barley, cotton, meats and wool, or such products, of whatever character, can only be thus obtained.

These elements of wealth are not taken from a single warehouse or depository, but are distributed throughout the length and breadth of this fertile land in their undeveloped condition. In the early settlement of this country and development of its civilization the human family was in a large measure independent of each other. The weaving and spinning was done in the immediate household; the fuel taken from the forest; meats from the animals that roamed the undeveloped fields; the minerals smelted and forged, reducing them to their commercial uses in the immediate vicinity of their production. These were days when the demands were not so great, and the scientific development less pronounced, but as the population increased there came a demand for specialized labor; the factory sprung up; farm machinery, structural material and better homes were demanded; the housewife no longer did the carding, spinning and weaving, these things all being manufactured and refined by certain classes, thus developing the segregation of the production of raw material and the manufacture of the finished product. This condition continued to develop and multiply until great cities were built and the great wealth of the country began to be concentrated. This condition created demands for means of communication and transportation; first, developed along the rivers and great waterways of the land, then came that wonderful development of the privately-owned highway system—the railroads of the country, which are in their nature and legal contemplation—highways. They have been developed to the highest state of efficiency, and the public have willingly and uncomplainingly contributed to their support to such an extent as to reward their promoters and operators with somewhat more than a reasonable profit.

This development has led up to the demand for the more permanent highway connecting the source of production with the railways or waterways that carry these products to their place of manufacture. This improvement should be done at the expense of the general public. These demands are not local ones and depending upon the local surroundings for their development, construction and maintenance. The objection has often been heard that since the cities or places of concentrated wealth have made their own improvements, the several rural districts should therefore bear the burden of building these public highways that are of necessity for the benefit of the public of that particular county, State or nation, and I therefore reason that the conception of the law is correct in the application of a general tax for these improvements, as they will be an asset not only to the restricted district, but be of value to the entire populace of the several units involved, selected and defined in accordance with the importance of the improvements contemplated. There is no doubt a special benefit that should be borne by the locality especially benefited.

If you could convince the general taxpayer that for every dollar expended he would receive two, then loan him the one and guarantee the return of the two, I feel sure that he would accept the opportunity, and yet that seems to be the opportunity presented to the public, and the farmer and truck gardener in particular, in the brick-paved highway. The little that the brick roads would cost you personally amounts to nothing compared with the amount that such roads would add to your yearly income, increase the value of your farm and add in an untold measure to the happiness of your family. It has been estimated that 90 per cent. of the criminals

in the land originate in the city. You are spending immense sums for the building of courthouses, jails and State prisons. If like sums should be spent in the improvement of your country highways and the general development of the resources of your country giving employment to the unemployed in building of the splendid brick highway, instead of providing means for the employment for criminals from the prison, had we not better provide such employment as to eliminate the dependency of fathers and mothers and the discontent of the sons and daughters at the end of a mud road, by spending, if need be, greater sums in beautifying the lives and interest of the rural districts, thus reducing to the minimum the population of our asylums and prisons and making an investment that would do more for the uplifting of humanity than could be done if one-half of the wealth of the nation were spent in the persecution and confinement in prison of all the criminal classes. Invest your money in eliminating the criminals rather than in their punishment.

As to your yearly income and increase in value of your farm lands, the following facts may help to make clear to you: I recently observed the revenue from two separate farms of 320 acres each, located in the corn belt of Illinois, one at the end of a four-mile brick-paved road, the other at the end of a four-mile mud road. These farms should produce, under the ordinary rotation of crops annually, 280 tons of corn, 80 tons of oats and 120 tons of hay, or 480 tons in the aggregate to be delivered over four miles of roadway. On the brick road there has been delivered 11 tons of grain in one trip by one team, using five wagons, while on the earth road two tons were all that could be delivered by a similar team. The haul being four miles in both cases, and as they could make three trips a day, 24 miles team travel, the team on the earth road could deliver six tons per day at a cost for team and wagon of \$4.50, thus making a cost of 75 cents per ton for the four-mile haul. On the brick road the delivery was 33 tons per day, at a cost of 19.7 cents per ton on a four-mile haul, a difference of 55 cents per ton in the cost of delivery in favor of the brick road, or a difference in cost of \$264 on the 480 tons delivered. This is only a small per cent. of the actual loss to the farmer living on the earth road, as he has had to sell his grain at a time when the roads were in condition that it could be delivered without regard to the price of his product. From actual experience it has been demonstrated that this would represent a loss of \$1.50 per ton on corn, \$2.50 per ton on oats and \$5 per ton on his hay, making a loss in the aggregate of \$920 on account of not being able to deliver at the best market price. This, with the loss in cost of delivering, makes \$1184, or 10 per cent. on an investment of \$11,840, an increase in value of \$36 per acre on his 320-acre farm. This represents the investment in a nine-foot brick highway that has cost the taxpayers of the township \$10,000 per mile, or if all of the principal highways of the township could be improved, would only represent a tax on all of the property, or \$10 per acre. These brick roads are not a liability, they are an asset. They don't cost you money, they make you money. It isn't a question of whether you can afford brick roads—the question is, How can you get money enough together to do without them? Bad roads cost like the mischief. The most expensive road is the one you cannot use.

The cost of a brick road 10 feet in width at \$1100 per foot in width per mile as compared with the roads being built of other materials at a cost of \$550 per foot in width per mile at the end of a 20-year period has been demonstrated to be less expensive after adding to the original cost in each instance 5 per cent. on original cost, together with the maintenance in either case for the 20-year period. This does not take into account the expense and inconvenience due to the repairs and resurfacing of the cheaper roadway, nor does it give credit to the brick road for being in a serviceable condition at all times for the 20-year period. Many brick streets are today in perfect condition that have withstood the traffic and the effect of the elements for more than 20 years.

The term permanent roadway is often misapplied; however, it has been said by a prominent authority that "the life of a well-constructed brick pavement cannot be estimated with any great degree of exactness, first, because the traffic conditions are constantly changing,

and second, because no brick pavement which has been constructed in accordance with the best modern practice has yet worn out. The amount of wear sustained by given pavements during comparatively long periods of years has been determined in several instances, but has usually been so small as to make the probable term of service appear almost indefinite." From such evidence we may conclude that the properly-constructed brick road is entitled to a life of 20 years without repair, or a period long enough to allow us to forget that the original construction ever cost anything. The original cost is as far as many of us can see. Benefits are too seldom looked into. We are inclined to complain of taxation as a burden, instead of a blessing, and the real foundation of our civilization.

The greatest assets of the most substantial nature are transportation and agriculture. Neither can be fully developed without the other.

The total tonnage drawn over the highway at this time may be quite small, but upon the improvement and development of the road and the resources of the country, the tonnage may be increased many tons. While the requirements of today may be only 10 to 20 tons, these improved conditions have caused this road to become a main highway, with from 200 to 300 vehicles per day, many of them three to six-ton trucks. Not only should the improvement be made to care for the present traffic, but should be improved to provide for a far greater traffic, not only in the number of vehicles, but the character of the vehicles. The traffic which was once only local, confined to teams from a few of the neighboring towns and villages, has become interstate, and almost national in character.

Such roadways should have a firm, unyielding foundation, drains so that the water will not remain in side ditches, or be held in the subsoil higher than within 18 inches of the wearing surface; upon the foundation it has been found necessary to provide a sand-cushion of sufficient depth to compensate for the irregularities in the base and the difference in the depth of the units used in the wearing surface. This cushion may be of a specified depth from one to two inches, preferably not more than one and one-half inches. The most important feature is that this sand-cushion should be made firm and evenly compacted, that the bricks may rest thereon without imbedding them, as the space between the bricks should be left open to receive the bonding material. The specifications should make provision for the character of sand to be used and the proper preparation of the sand bed. The material for the wearing surface should be of such a character as to withstand the action of the elements for all time. If these requirements be carried out, what other material could fulfill the specifications. Such material would be an asset for all time, or until it should be destroyed by impact or abrasion, and if perfect construction could be obtained, we might truthfully claim a permanent investment. As, certainly the elements of grade, location, drainage and foundation are permanent, and if brick of such character as can only be injured or destroyed by a blow or abrasion be furnished, and these of such quality as will meet the requirements of all other surfacing material, you certainly have the peculiar advantage in that they are not to be affected by frost, nor fire, nor time, and now that the quality of abrasion and impact can so definitely be determined, you are only subjected to the requirements of proper construction. The material should be of such character and placed in the roadway in such a manner as to offer the least resistance to travel. The surface should be made smooth, and so bonded together as to become monolithic. Proper specifications should provide that the bonding material should surround every unit, and that this bond should be of a permanent and enduring character.

These highways should be so improved that they will require the minimum of maintenance, and that they will last in a serviceable condition longer than the life of the bond issue created to provide for their investment.

It is announced that the Maryland Steel Co. at Sparrows Point has been awarded the contract for two new colliers for the Isthmian Canal Commission, to cost \$985,000 each. Each will have a capacity of 12,500 tons, exclusive of bunker capacity.

Final estimates of the United States Geological Survey show a production last year of 92,097,131 barrels of Portland cement in this country, shipments of 88,089,377 barrels, and stocks on hand of 11,220,328 barrels.

*An address at New Orleans meeting of the National Brick Manufacturers' Association.

Material Affairs Engaging the South's Attention

TEXAS' NEGLECTED MARBLE WEALTH.

[William P. Phillips, Director Bureau of Economic Geology and Technology, University of Texas, in Dallas News.]

Permit me, after the ancient manner, to take a text for this discourse. It is found in the Dallas News of the 7th inst., and reads as follows:

"Ask for Specifications—Vermont Marble Co. Now Ready to Begin Shipments.

"Mayor W. M. Holland received a letter yesterday from the Vermont Marble Co., contractors for the marble to be used in the new municipal building, saying that their quarries are now ready to begin shipment of the marble on the contract, and asking for specifications as to the material needed. Approximately \$30,000 worth of marble will go into the new structure."

As a parallel text reference is made to a recent article in the Houston Chronicle under the title "Texas Minerals." As a side reference I may mention that on a visit to a well-known stone yard, not more than a thousand miles from Austin, I found Indiana sandstone under the saws. As a minor reference it may be stated that Texas granite was used in some of the work for the new postoffice in Austin only after a protest was made against the employment of a granite coming from another State.

I do not know what is the value of the marble used in public buildings, office buildings, private residences, etc., in Texas during the last five years, but I believe that it is considerably in excess of \$250,000. Not one foot of this was of Texas origin. Why? Because there are no marble quarries in Texas. If some architect should specify Texas marble, he could not get a single slab. If some patriotic Texan, desirous of using Texas marble in his residence, should insist upon it, he would not be able to buy it anywhere in Texas.

Is there no good marble in Texas? There is. In Llano county, in Brewster, in Burnet, in El Paso, in Culberson, in San Saba there is excellent marble, but not a single quarry. In Travis county, near Austin, there is a deposit of marble that closely resembles the Caen marble of France, but not a single slab is to be obtained on the market.

The Llano county marbles have not been systematically explored, though excellent specimens from deposits within easy reach of the railroad were shown at the St. Louis Exposition and are now in the museum of economic geology at the university. The same may be said of the Burnet county marble. The Brewster county marble is not far from the Southern Pacific Railway at Paisano Pass, beyond Alpine. Some work has been done here, but nothing of late. There are three distinct kinds of marble in this deposit—a white marble closely resembling the famous Carrara marble of Italy; a black and white, almost a replica of the Killarney marble of Ireland, and a mottled black, which is most attractive. Several years ago I accompanied a marble man who had spent many years of his life at Carrara to this Brewster county deposit. After spending some time there and looking at the stone carefully, he said to me that the white marble more closely resembled the Carrara stone than any he had seen in this country.

At the St. Louis Exposition polished slabs of the Brewster black-and-white marble were mistaken for Killarney marble. An interesting story hangs thereby, but this is a sermon and not a collection of stories, so I forbear.

The Culberson county stone, in Marble Canyon, north of Van Horn, is a creamy white and very beautiful. The locality is some 30 miles from rail, but may be brought within a few miles if the projected railroad is built. Very little is known of the El Paso county stone, although polished specimens in the museum are absolutely unique in their unusual beauty. They come from the Eagle Mountains. One of them is a delicate creamy pink shot through with blood-red markings of fantastic design. The other is very much like the ancient and world-famous Numidian marble, which is as scarce as it is beautiful.

The San Saba marble is generally of a soft dove color, devoid of special markings, but most pleasing to the eye. An almost white marble and a reddish stone, somewhat like Tennessee marble, is also found. These localities are within easy reach of the railroad from Lometa to Brady. Some diamond drilling has been done on the San Saba marbles, and good cores have been obtained.

The bureau of economic geology and technology has

undertaken to prepare a special publication on the building materials produced and manufactured in Texas. It will include chemical analysis and physical tests of limestones, sandstone, granite, marble, serpentine, brick, hollow tile, etc., with descriptions of the quarries, localities and plants, drawings, photographs, etc. A good start has already been made, and many samples are now being received. We would be pleased to have samples from anyone who has a good deposit of any kind of building stone, or who is making brick, hollow tile, etc. Letters have been written to every known quarryman and brickmaker in the State asking for his hearty co-operation in this important work. There is no expense connected with this matter except the payment of freight, express or parcel post charges or samples. We cut from each sample a two or two-and-a-half-inch cube and determine, in a special machine, the force required to break and crush this cube. The strength, in pounds per square inch, is calculated from the total force required to break the cube. From another portion of the sample we determine the specific gravity, weight per cubic foot, percentage of cells by volume, volume of cells in 100 parts by weight and the absorption of water.

We have, so far, tested nearly every kind of brick made in the State, and many samples of limestone, sandstone, granite, marble, serpentine, etc.

The more striking varieties of marble, granite and serpentine will be illustrated in the natural colors for this report. There will be no charge for the publication when it is issued, but it will be several months before all of the required data can be secured.

No publication of this kind has ever been issued in Texas, and we hope to make it accurate, interesting and practical. We shall then have something to go upon, something that can be referred to by those who are concerned with building materials and who are anxious to know what Texas can offer.

If we can offer a wide range of excellent building materials, some of them of unusual excellence and beauty, whether we can divorce our people from the Vermont or Georgia or Indiana or Tennessee habit remains to be seen. One thing is certain, namely, that it must be shown to be to their pecuniary advantage to shop at home.

During the 10 years ending with 1912 the total value of the stone (granite, limestone and sandstone) produced in Texas was \$5,928,186, or an average yearly value of \$599,818.

During the same period the total value of the clay products (brick, tile and pottery) was \$22,898,683, or an average yearly value of \$2,289,868.

So far as can now be ascertained the total value of all of the mineral products of Texas from 1882 to and including 1912 was \$228,901,926—a very respectable showing. The plans that have been made for a systematic investigation of our mineral wealth include the preparation of bulletins on special subjects. Two of these bulletins have already been issued, namely, "The Composition of Texas Coals and Lignites and the Use of Producer Gas in Texas," and "Report on the Oil and Gas Fields of Wichita and Clay Counties." A comprehensive report on "The Fuels Used in Texas" is now in press and will soon be issued. A report on the building materials in Texas is now on hand and will be issued late in the year. We are also preparing a geological map of the State to set forth the chief geological formations over the entire State, a work that has not yet been attempted until now.

We have issued a map of East and Northeast Texas, showing the location of iron ores, lignite, producing oil wells, etc. The edition has been completely exhausted. We have prepared a map of the country west and northwest of Fort Worth, showing the location of coal outcrops, coal mines, quarries of limestone and gypsum, producing oil and gas fields, deposits of copper ore, etc. This will be issued as soon as possible. The bureau is doing what it can, with very limited means, to investigate the mineral wealth of the State and issue accurate reports, maps, etc. With \$15,000 a year for salaries, equipment, field expenses, laboratory, museum, maps and printing, it is not possible to do more than one thing at a time.

MUNICIPAL ICE-MAKING.

[Tampa (Fla.) Tribune.]

The city of Jacksonville, which has made a financial success of its municipal lighting and water plants, re-

sulting in great reductions in the cost of these utilities to the public, is about to engage in another municipal enterprise which promises further relief for the people—a municipal ice factory.

Combinations of ice manufacturers exist in practically all cities, with the result that the public pays about twice what ice is worth. If the city of Jacksonville can apply the same business principles to the conduct of an ice plant as it has to its light and water plants, the people of that city will be greatly benefited.

Ice is almost as great a necessity in this climate as water, and it ought to be almost as cheap—at least cheap enough to be in reach of all the people. The Jacksonville experiment will be watched with great interest throughout the country. If successful, we may expect a strong sentiment for its adoption in other cities.

LIEN LAWS AND WAREHOUSING.

[Thomas W. Alexander of Charlotte, N. C., in Charlotte Observer.]

Apropos the advent of a general warehouse system for the handling of cotton throughout this section, as proposed by Mr. Duke and his associates, and which will be one of the chief topics at the approaching meeting of the American Cotton Spinners' Association in New York, a discussion of the lien laws applicable to the agricultural industry in North Carolina may be of interest.

Revisal Section 1913. "Landlord's lien. Crop vested in. To secure. How enforced. When lands shall be rented or leased by agreement, written or oral, for agricultural purposes, or shall be cultivated by a cropper, unless otherwise agreed between the parties to the lease or agreement, any and all crops raised on said lands shall be deemed and held to be vested in possession of the lessor or his assigns at all times until the rents for said lands shall be paid and until all the stipulations contained in the lease or agreement shall be performed, or damages in lieu thereof shall be paid to the lessor or his assigns, and until said party or his assigns shall be paid for all advancements made and expenses incurred in making and saving said crops. This lien shall be preferred to all other liens, and the lessor or his assigns shall be entitled, against the lessee or cropper or assigns of either, who shall remove the crop or any part thereof from the lands without the consent of the lessor or his assigns or against any other person who may get possession of said crop or any part thereof, to the remedies given in an action upon a claim for the delivery of personal property."

This is familiarly known as the "landlord's lien," and was enacted in 1876. This law is further fortified by making criminal certain acts, such as the removal of the crop before paying the rental, failure to work crop, abandoning crop, etc.

The Supreme Court has construed this section in upward of 100 cases, and every conceivable aspect has been presented.

As soon as the relation of landlord and tenant is established the lien attaches (106-653), and at once becomes paramount to all other mortgages, liens or claims whatsoever, even to the exclusion of the personal property exemption (82-87 and 144-167). All crops are vested in the landlord until rent and advancements are paid (123-749 and 100-74), and the title is not impaired by the fact that the tenant conveys to a third party, who takes without notice of the landlord's claim (88-89); nor can cropper convey a legal title to his portion of the crop before settlement (32-63).

In one case the facts were that a landlord directed a purchaser to pay the tenant for the cotton, but before payment revoked the order, and the purchaser ignored the revocation and paid the tenant. It was held that the landlord was entitled to recover the sum from the purchaser (107-123). The landlord is liable to account to parties having liens for the excess of the crop over his own lien (113-444). An action will lie in favor of the landlord where anyone obtains possession of the crop and denies the landlord's claim (89-140). This lien extends to the legal expense necessary to enforce it (85-159). A landlord's lien can be surrendered, but this must be upon a consideration (107-123). This lien applies only for the current year (116-153 and 114-141). "Advancements" are held to be anything of value which the landlord supplies the tenant or cropper, in good faith, for the purpose of making and saving the crop (106-124).

(2) Revisal Section 2052. "On crops for advances.

If any person shall make any advance either in money or supplies to any person who is engaged on or about to engage in the cultivation of the soil, the person so making such advance shall be entitled to a lien on the crops which may be made during the year upon the land in cultivation of which the advance so made has been expended, in preference to all other liens existing or otherwise, except the laborer's and landlord's liens, to the extent of such advance; Provided, an agreement in writing shall be entered into before any such advance is made to this effect, in which shall be specified the amount to be advanced, or in which a limit shall be fixed beyond which the advance, if made from time to time during the year, shall not go; which agreement shall be registered in the office of the register of the county in which the person to whom the advance is made resides, within 30 days after its date."

This is the "agricultural lien" and is analogous to a chattel mortgage, and like the section supra has been construed by the Supreme Court on many occasions. This lien, unlike the landlord's, has to be in writing and registered (86-350); the statute must be followed and the crop and land carefully described and identified (99-571); "advances" are similar to those under section supra (90-276); this lien only extends to the crop for the current year (74-686). Cotton, like money, is almost incapable of identification, and hence a party holding an agricultural lien or chattel mortgage would be put to the necessity of identifying the actual cotton when title by possession had passed to the warehouseman.

In brief the liens most likely to be encountered in operating a warehouse would be:

- (a) Landlord's lien.
- (b) Laborer's lien.
- (c) Agricultural lien.
- (d) Chattel mortgage lien.
- (e) Stolen cotton.

In reference to the latter, it is, of course, true that the owner of stolen cotton could follow it into the hands of anyone who had received or purchased it, with or without knowledge of the larceny. In this connection there are also many laws governing the sale of cotton, as to the hours, whether in seed, lint or bale, and also affecting the weighing, such as our local cotton weigher being the only official weigher in this county. Many of these laws are local and apply only to a certain county or counties. These lien laws are seldom violated by the tenant, because to dispose of the cotton without satisfying all liens is a criminal offense, and tenants do not often take this chance.

The bed-rock upon which a warehouse system must rest in its final analysis and practical operation is, of course, the absolute stability and unquestioned title of the receipt that it issues.

I see no reason why a system cannot be devised by which, under careful management, the liability under these liens could be met. These lien laws are salutary, and experience has demonstrated that they are conducive to fostering the agricultural industry. They will hardly be repealed or modified.

The cotton crop is produced largely upon "shares," or for "a part of the crop," or for "standing rent," i. e., so many bales for so many acres, or for a definite monetary rental. Therefore, in the actual management of a warehouse, in order to absolutely guarantee the title to the cotton, it would be necessary to have a "pedigree" of each bale. This should be duly authenticated by the landlord and the tenant; it should set forth where and by whom the cotton was raised, and that there is no outstanding laborer's, agricultural or other lien thereon. Anyone executing such a statement, if untrue, and receiving a receipt (being a thing of value), would be guilty of false pretense, and subject to the criminal law. The register's office should be examined frequently as an additional source of protection.

Space will not permit a more extended discussion, but from this cursory presentation the "lien" laws need have no terror for a system of handling our chief source of wealth, as in actual practice a conflict will rarely occur. A comprehensive warehouse plan will prove the greatest blessing the agricultural South has received since the invention of the cotton gin, and will be hailed with delight by all, whether actually engaged in producing the "fleecy staple" or not.

Capitalized at \$300,000, for the purpose of mining coal and iron near Edmondton, Ky., the Premier Products Co. has been organized by Arthur Cobb and associates of Bowling Green, Ky.

BUILDING AT LAKELAND.

Last Year's Record of \$1,794,000 Likely to Be Surpassed in 1914.

[Special Correspondence Manufacturers Record.]

Lakeland, Fla., April 17.

Last year \$1,794,000 was spent in new building construction and public improvements in Lakeland. It looks as if this record is not only going to be equaled this year, but surpassed.

Here is a brief outline of the work now under construction and proposed in Lakeland: An addition to the high school, \$15,000; a new grammar school, \$25,000; a fireproof storage-house, \$10,000; an addition to the Kibler Hotel, \$25,000; improvements in the State Bank, \$7,000; orange packing-house, \$10,000; shops and terminal facilities for the Atlantic Coast Line Railway Co., \$285,000; two reinforced concrete wet bins for the Coronet Phosphate Co., \$30,000, and approximately 200 houses, to cost from \$1500 to \$10,000, which are either under construction or will be within the next 60 days. This is a statement of work within the city limits of Lakeland.

In the county the Lakeland Phosphate Co. has acquired 18,000 acres of land, and with the erection of the plant propose a development that will call for the outlay of \$1,000,000.

Lakeland is partly composed, surrounded and bounded by at least 100 small and pretty lakes, from which it begets its name. There are eight of them within the city limits. These picturesque bodies of water, and the altitude of 206 feet above the sea level, are putting Lakeland forward both as a summer and winter resort. There are always pleasant winds sweeping over these lakes that seem to have a soothing effect on the temperature during all seasons of the year.

Perhaps the most unique and prettiest development that is proposed is that of Lake Morgan. The Lakeland Paving & Construction Co. has plans to construct a 50-foot boulevard around this lake, a circular distance of about a mile. The boulevard will be macadamized, the sidewalks paved with concrete, and alternately, at short intervals, tropical palms will be set out between an up-to-date system of White Way lights. There are already several pretty homes and apartment-houses facing on this lake, and the completion of this development will doubtless be the incentive for the erection of others.

There is a live Board of Trade here, which is a factor of great good for the city and community.

ROY G. BOOKER.

Birmingham Iron Market.

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., April 18.

The iron trade in the Alabama district is very quiet. The nominal quotations for No. 2 foundry are \$10.75 and \$11 a ton, but business is so quiet that it is difficult to establish a real live price. Consumers are buying only in small quantities, and laying in no large stocks, but should there be more activity in the steel industry there would be many good orders for iron. Within the past two weeks there has been sold by all interests not over 40,000 tons of iron not the output of the furnaces in operation, while there has been a corresponding increase in quantity of pig-iron on the yards. One interest alone reports 70,000 tons of iron on its yards, and there is probably more iron on the yards now than for the past two years. Iron men do not look for any material improvement in the iron trade in the United States until conditions in Europe improve, which are said to be demoralized so far as iron and steel are concerned. One furnace of the Woodward Iron Co. is out of blast on account of a serious accident a week ago, and it will take two or three weeks to make the necessary repairs to put it again in blast. The following are the prices gross f. o. b. cars Birmingham:

- No. 1 foundry and No. 2 soft, \$11.25 to \$11.50.
- No. 2 foundry and No. 2 soft, \$10.75 to \$11.
- No. 3 foundry, \$10.25 to \$10.50.
- No. 4 foundry, \$10 to \$10.25.
- Basic, \$10.50 to \$11.
- Charcoal iron, \$23.50 to \$24.

The old material market has been very quiet the past week; very few inquiries and only a few sales made, with prices about the same. There is no advance in prices at all, and dealers cannot see at this time any

prospect for any better tone in the market. The following prices prevail f. o. b. cars Birmingham:

- Old iron axles (small), \$15 to \$15.50.
- Old steel axles (light), \$15 to \$15.50.
- Old iron rails, \$12.50 to \$13.50.
- No. 1 railroad wrought, \$12 to \$12.50.
- No. 2 railroad wrought, \$10 to \$10.50.
- No. 1 country wrought, \$9.50 to \$10.
- No. 2 machinery cast, \$10.50 to \$11.
- No. 1 steel scrap, \$10.50 to \$11.
- Standard car wheels, \$12 to \$12.50.
- Tram car wheels, \$10.50 to \$11.
- Light cast and stove plates, \$9 to \$9.50.

There is no improvement in the conditions in the cast-iron pipe line, no large orders, some plants closed down, while others are working only on half time. The pipe concerns cannot see at this time any prospects of better business, as all agree that the tight money market and the failure of municipalities to sell bonds have made it impossible for any large orders to be booked. The soil-pipe plants are making good time and have good orders, with some good sales. Prices have dropped somewhat, and interests state that they can scarcely sell for any increase above the cost of production.

The Sloss-Sheffield Steel & Iron Co. contemplates large improvements, and when completed the officials of the company state that it will result in a reduction in the cost of production of iron and coal by the corporation.

The Copeland-Ingles Shale Brick Co. of Birmingham announces the sale of 6,000,000 brick to two counties in the State of Florida, 1,000,000 of the brick going to Tampa and 5,000,000 bricks had been sold to Orlando. The bricks are to be used in building county highways, and it is stated that plans had been made to construct a brick highway from Jacksonville to Tampa, a distance of 212 miles. Officials of the company state that the contract is one of the largest yet given in Birmingham, and the company would participate in bidding on other contracts that will be let in the next few days.

The blast furnace managers of the Steel Corporation will be in Birmingham on April 24, the announcement having come from the offices of the Tennessee Coal, Iron & Railroad Co. The committee is composed of blast furnace managers from the several plants of the Steel Corporation in the East and Middle West. They are appointed by the president, and they look over the properties of the corporation for the purpose of adapting for use at their own plants ideas which they see in use. The committee will hold a business session in the offices of the company, and will visit the furnaces at Ensley and Bessemer. The plan of visiting other plants has been followed for some time, and many new ideas have proven most valuable to the men on the committee and also to the Steel Corporation.



THE COMMERCE BUILDING, WASHINGTON.

Owned by Commerce Building Co. and occupied by Department of Commerce, U. S. Government; view as enlarged; portion of structure already erected; addition to be erected, 42x126 feet, making structure 126x168 feet; fireproof; asphalt and gravel roof; 12 stories; cost of addition about \$200,000; architects, Milburn, Heister & Co., Washington; contractor, Geo. A. Fuller Company, Washington.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Further details of highway undertakings and bond issues mentioned below are given under the headings Construction Department and New Securities, published elsewhere in this issue.]

Bonds Voted.

Baton Rouge, La.—East Baton Rouge Parish voted \$186,000 bonds to construct roads.
Kaufman, Tex.—District No. 3, Kaufman county, voted \$300,000 bonds for road construction.
Kaufman, Tex.—Justice Precinct No. 8, Kaufman county, voted \$150,000 bonds for road construction.
Lillington, N. C.—Lillington township of Harnett county voted \$15,000 bonds to construct roads.
Orlando, Fla.—City has disposed of \$100,000 bonds for street paving.
Pelham, Ga.—City voted \$4000 bonds for street improvements and paving.
Raleigh, N. C.—City voted \$86,000 bonds to pave about 25 miles of streets.
Snyder, Tex.—Scurry county voted \$50,000 bonds to construct roads.

Bonds to Be Voted.

Batesville, Tex.—Zavalla county votes May 12 on \$10,000 bonds to improve roads.
Cameron, Tex.—Road District No. 8 of Milan county will vote on \$100,000 bonds to construct roads.
Charleston, W. Va.—City will vote on \$365,000 bonds to pave streets, etc.
Fayetteville, W. Va.—Fayette county votes June 6 on \$900,000 bonds to macadamize and improve roads.
Lewisburgh, Tenn.—City votes May 9 on \$20,000 street improvement bonds.
Lillington, N. C.—Black River township of Harnett county votes June 10 on \$25,000 bonds to construct roads.
Ocala, Fla.—City votes in June on \$400,000 for several miles of paving, etc.

Contracts to Be Awarded.

Baltimore, Md.—State receives bids until May to build five sections of State highway, about 18.40 miles.
Benton, La.—Bossier Parish Police Jury has \$1,750,000 available to construct 45 miles of permanent hard roads.
Birmingham, Ala.—City receives bids until April 28 for street improvements; cost about \$14,750.
Clanton, Ala.—State invites bids until May 9 to grade 13 miles of road.
Charleston, S. C.—City asks bids until May 5 to pave about 65,000 square yards on concrete base; probably 20,000 to 25,000 yards creosote wood block, balance sheet asphalt, asphaltic or bituminous concrete or bitulithic.
Clanton, Ala.—State invites bids to grade 13 miles of road through Chilton county; county to appropriate \$8000 and State \$3271.
High Point, N. C.—City will create paving improvement districts; now arranging for the first to include 40,000 to 50,000 square yards of asphalt paving.
Hillsboro, Tex.—District No. 1 of Hill county receives bids until April 29 to build 25 miles of bituminous bound rock and gravel roads.
Jacksonville, Fla.—Duval county receives bids until May 6 to pave 21,946 feet with concrete and vitrified brick.
Leesburg, Va.—Loudon county will expend \$43,000 on roads.

Port Tampa, Fla.—City receives bids until May 4 to pave about 11,248 square yards brick and concrete pavement and 12,200 linear feet of concrete curb and gutter.
San Antonio, Tex.—Rock Hill Toll Road Co. organized to construct 300 miles of toll road on Gulf of Mexico.

Contracts Awarded.

Alexander City, Ala.—City awarded contract for eight miles of four-foot sidewalk; about 16,000 square yards at \$1 per yard.
Baltimore, Md.—State awarded \$71,137 contracts for road construction.

Boswell, Okla.—City awarded contract for 20 blocks concrete sidewalks.

Columbiana, Ala.—Shelby county awarded contract for four miles of macadam road; estimated cost \$200,000.

Fairfax, Va.—Fairfax county awarded \$96,000 contract to construct 32 miles of road; \$116,000 available.

Fairmont, W. Va.—Marion county awarded contracts for 17 miles of road construction; cost, \$314,841.27.

Guntersville, Ala.—Marshall county awarded \$44,000 contracts for road improvements.

Hamilton, Ala.—Marion county awarded contract for 23 miles of pike road; cost about \$42,000.

Hickman, Ky.—Fulton county awarded contract to grade 77 miles of road.

Nashville, Tenn.—City awarded contracts totaling \$457,134.21 to pave 42 streets.

New Orleans, La.—City awarded \$26,000 paving contract.

New Orleans, La.—City awarded \$53,345 contract to construct shell roads.

Paragould, Ark.—City awarded \$113,000 paving contract.

Parkersburg, W. Va.—City awarded \$28,050.80 paving contract.

Rockford, Ala.—Coosa county awarded contract for three miles of State-aid road.

San Antonio, Tex.—City awarded \$1388.61 contract to construct sidewalks.

FOR A DRIVE ALONG THE GULF.

Two-Hundred-and-Fifty-Mile Toll-Road from Galveston to Brownsville.

[Special Dispatch to Manufacturers Record.]

San Antonio, Tex., April 17.

The main feature of the project of the Rock Hill Toll-Road Co. is a "shore drive" between Galveston and Brownsville, a distance of approximately 250 miles. Right of way 200 feet in width is assured under the toll-road law passed at the last session of the Legislature. The road will also go from San Antonio to Corpus Christi, distance of 155 miles. Twenty-five miles of the system are now built and in operation around San Antonio, ranging in width from 50 to 100 feet. Detailed plans and specifications for the new roadway have not been completed by company. R. G. COULTER.

The preliminary purpose of this project is to develop the pleasure features, and especially automobile assets of Southwest Texas, and for such interest as it may be to you I am enclosing you a plat of one section of the proposed roadway along the Gulf coast, from Galveston to Brownsville. J. P. Withers, president of the company promoting the road, says:

"This is a very novel and unusual situation, it being the only stretch of frontier or boundary of a country that is susceptible to control or ownership by a private corporation, this being due to the fact that this land belongs to the State of Texas, and not to the Federal Government, and is secured to us by a very unusual bill passed by the last Legislature for the specific purpose of facilitating the construction of automobile highways by private individuals or corporations.

"Congress has appropriated \$25,000 for a preliminary survey, looking to the construction of a military highway along the Rio Grande, between Brownsville and El Paso, and in the event this should be completed by the Government, by the combination of this Beach Route connecting with this military road at Brownsville, there would be a practically continuous highway of a very unusual nature from Houston to El Paso, following the United States border line."

States and Good Roads.

Funds available in all of the States for the improvement of roads during the year 1914 are shown in the Official Good Roads Yearbook issued by the American Highway Association, which is now ready for distribution. This is one of the new features of the book, which will make it invaluable to every State, county and municipal highway official.

The Yearbook discloses for the first time that appropriations by the State Legislatures for road improvement in the various States are available as follows:

Alabama, \$700,000; Arizona, \$535,724; Colorado,

\$375,000; Delaware, \$110,000; Idaho, \$275,000; Illinois, \$1,300,000; Iowa, \$7,310,000; Kentucky, \$25,000; Maine, \$1,540,000; Maryland, \$3,700,000; Massachusetts, \$2,447,315; Michigan, \$4,183,972; Minnesota, \$5,672,254; Mississippi, \$1,720,000; New Jersey, \$750,000; New Mexico, \$387,194; New York, \$6,000,000; North Carolina, nearly \$5,000,000; North Dakota, \$2,365,000; Ohio, \$3,500,000; Oregon, \$3,288,000; Pennsylvania, \$3,500,000; South Carolina, \$1,000,000; Virginia, about \$2,000,000; West Virginia, \$2,286,557, and Wisconsin, \$1,230,000.

These interesting figures have been obtained from the officials of the various State highway departments, and form merely one chapter of the yearbook, which covers every phase of the road movement in the United States. The yearbook lists all of the patents relative to roads and bridges, all road expenditures in recent years, all associations' work for road improvement, describes all the different methods of road construction and different road materials, giving a directory of all road bulletins, circulars and documents of interest to persons working for better highways and for all officials engaged in supervising work on roads.

Sections of the yearbook are devoted to work in different States and the progress of road improvement. Engineers actually engaged in building roads, as well as public-spirited citizens who are working for better roads in the various communities, have been waiting for the issuance of this volume by the American Highway Association, and will find many features in it which do not appear in last year's edition. One of the interesting features, for instance, is the description of dust preventives, while one chapter is devoted to convict labor and another to the financial phase of road improvement.

A summary of the road laws in the various States is of particular interest to motorists, while descriptions of specifications for highways in the various States will be of interest to engineers. There is also a chapter devoted to important events in the road movement in 1913, and another section devoted to road systems in foreign countries.

The yearbook is issued annually by the American Highway Association as part of its campaign to give the United States an adequate system of improved highways.

Road laws which have been on the statute-books of various States for more than 100 years will probably be repealed as a result of the movement which has been inaugurated by the American Highway Association in conjunction with the American Bar Association. The committees appointed by the two associations have had prepared through the co-operation of the United States Office of Public Roads a complete literal compilation of the road laws of all the States, as well as the laws relating to indebtedness, the use of convict labor and various other subjects which have a bearing upon the management of the public roads. An index chart for these various laws is now being prepared, and as soon as it is completed the committees will determine upon the lines along which revision will be sought. The governors of the various States will then be asked to recommend to the legislators as they meet the appointment of special committees to confer with the committees of the American Highway Association and the American Bar Association, with a view to adequate revision of existing road laws.

The committee of the American Highway Association was appointed at the American Road Congress held at Detroit in 1913, and is composed of P. T. Colgrove, president Michigan State Good Roads Association, chairman; A. B. Fletcher, State highway engineer of California; A. N. Johnson, State highway engineer of Illinois; J. E. Pennybacker, former secretary American Highway Association and now chief of the division of road economics of the United States Office of Public Roads, and Frederick E. Wadhams of Albany, N. Y. Mr. Wadhams is also chairman of the special committee appointed by the American Bar Association to co-operate with the American Highway Association. These two committees are, in turn, co-operating with the committee on uniform legislation of the Bar Association, of which Mr. Chas. Thaddeus Terry of New York is chairman.

The first step in the revision of the State road laws will be to recommend that all obsolete, useless or unnecessary road laws be repealed. The next step will be to simplify and arrange in logical order the existing necessary road laws. The committee has found that in some of the States an accumulation of road laws running back over 100 years exists, thus creating almost hopeless confusion. Certain basic features of good administration will be urged by the joint committees, such as

the payment of road taxes in cash; the elimination of a multitude of unnecessary road officials now characteristic of many of the States; the requirement of skilled supervision in the actual construction and maintenance of roads by providing qualification tests; the constant employment of highway engineers or superintendents; the adoption of the appointive rather than the elective method for such officials; the substitution of continuous maintenance for the present intermittent method; the proper utilization of convict labor where climatic and other conditions warrant its use on the public roads for the preparation of road materials; the general adoption of the principle of State aid and supervision; the proper safeguarding and accounting of road funds.

Wherever practicable, uniformity among the road laws of the various States will be urged by the committees, as it is realized that the traffic is now controlled by economic conditions rather than by State lines, and should not be hampered by conflicting laws of the various communities.

It is expected that a most interesting report will be made by the joint committee at the Fourth American Road Congress, which will be held at Atlanta, Ga., November 9-14, 1914. The American Bar Association will participate in the congress, and will devote its energies to the subject of legislation. The annual road congress is engaging more and more the actual participation of great organizations whose work bears in some essential respects upon the road movement. At this year's congress the National Civil Service Reform League will have charge of a specific session devoted to the merit system in road administration, thus following closely the lines of legislative reform already inaugurated.

For 17 Miles of Roads.

Contracts for about 17 miles of roads in Maunington District have been awarded by Marion County Commissioners at Fairmont, W. Va. These contracts total \$314,841.27, and bridge construction also required will cost \$15,000.

Paving Contracts for \$457,000.

Paving contracts totaling \$457,134.21 have been awarded by the City Commission of Nashville, Tenn. These were apportioned as follows: Southern Asphalt & Construction Co., Birmingham, for wood block and vitrified brick; Adamant Stone & Roofing Co., Nashville, for granite; Uncle Hiram Roofing Co., Nashville, for bituminous macadam. Wm. W. Southgate is the city engineer in charge.

Paving to Cost \$113,000.

About \$113,000 is the amount of a contract awarded by the Commissioners of Paragould Paving District, Paragould, Ark., for 60,000 yards of paving. Williston Construction Co. of Chicago received this contract, and E. A. Kingsley of Little Rock is the engineer in charge for the commissioners.

Warn Lumber Corporation.

Warn Lumber Corporation, Sitlington, W. Va., has been incorporated with \$200,000 capital stock by W. H. Warn, Jr., and R. B. Warn of Seebert, W. Va.; Wm. R. Thomas and Wm. Kreiger of Johnstown, Pa., and P. S. Warn of Meyersdale, Pa.

Blackwood Lumber Co.

For the purpose of manufacturing lumber, the Blackwood Lumber Co. has been incorporated with \$200,000 capital stock and officers as follows: Jas. E. Walker, president; E. R. Chapman, secretary; both of Roanoke, Va.

To Quarry White Marble.

Alabama White Marble Co. of Mobile, with a capital stock of \$200,000, has been incorporated, with officers as follows: H. E. Baxter, president; John R. Bishop, vice-president; H. H. McClelland, treasurer; all of Mobile; Leroy Bishop, vice-president, Talladega Springs, Ala.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NASHVILLE, SHILOH & CORINTH.

Rich Mineral and Timber Regions to Be Developed by New Line.

Application to charter the Nashville, Shiloh & Corinth Railway Co. to build a line from Nashville, Tenn., to Corinth, Miss., about 150 miles, has been made at Nashville, and it is stated there that the enterprise will be financed by Allen W. Jones of Augusta, Ga., who is also interested in the East & West Coast Railroad, now under construction between Bradentown, Manatee and Arcadia, Fla. Capital of the new line will be \$100,000. It has been projected for some time, a prime mover in the plan being Clifton Thomas, secretary of the Business Men's Club at Corinth. It will traverse a region containing phosphate, iron ore and timber, and practically all will be within the boundaries of Tennessee, as only five miles of the route lies in Mississippi. There are rich iron deposits in Wayne county, Tennessee, which also contains 100,000 acres of virgin timber lands. This county is practically without railroad facilities at present, as are Perry county, to the north, and Hardin county, to the west, both of which the new line will bisect.

The principal bridge to be built will be over the Tennessee River, probably at Savannah, Tenn., which is in Hardin county. The road is to be constructed with grades of not more than 1 per cent. and curves of not more than 4 degrees. It is estimated that the cost of construction for the entire line will be \$5,500,000. Of this amount, seven counties are asked to contribute \$2,100,000 in subscriptions, for which they will receive preferred stock. Already \$765,000 is subscribed. G. S. Bruce of Nashville is the engineer who will make the final surveys.

A committee has been appointed at Nashville to push the plans, and among the members are W. M. Pollard, general chairman; E. B. Stahlman and others of the Commercial Club; J. P. Beesley and others of the Business Men's Association; R. L. Burch and others of the Industrial Bureau. Among others mentioned as interested, some of whom are presumably incorporators of the railroad company, are Rutledge Smith and others of Nashville; H. J. Haggard of Wayne county; D. T. Bates and J. B. Walker of Hickman county; J. A. Greer of Perry county; J. L. Ross of Hardin county, and George Hazard of Corinth.

New Equipment, Etc.

Norfolk & Western Railway has awarded its contract for 40 Mallet type locomotives to the Baldwin Works, Philadelphia.

Charlotte Harbor & Northern Railway is getting prices on 30 phosphate cars.

Southern Railway has ordered 9000 tons of rails from the Tennessee Coal, Iron & Lumber Co., Birmingham, and 2500 tons from the Illinois Steel Co., Chicago.

McEwen Lumber Co., Azalea, N. C., wants to buy from 4 to 6 second-hand railroad track frogs to use with 50-pound relaying rails; also bolts, angle bars and spikes for the same rail. Would like to have price on a second-hand Climax or Lima make standard-gauge geared locomotive. W. B. McEwen is president of the company.

Coal & Coke Railway has ordered 2 consolidation locomotives from Baldwin Works.

St. Louis & San Francisco Railroad is reported in the market for 16 locomotives.

Chicago, Burlington & Quincy Railroad has ordered 1000 cars from the Haskell & Barker Car Co., Michigan City, Ind.

St. Louis, Brownsville & Mexico Railway is reported about to purchase 700 freight cars.

Missouri Pacific Railway is in the market for 10,000 tons of rails.

Southern Pacific's car orders will, it is expected, include 930 gondola cars of 50 tons capacity; 100 National dump cars of 50 tons capacity; 203 tank cars of 12,500 gallons capacity; 400 automobile cars and 400 stock cars.

Pennsylvania Railroad will build 41 all-steel box cars at its own shops.

Missouri, Kansas & Texas Railway is reported in the market for 100 tank cars.

Southern Traction Co., Dallas, Tex., has ordered 6 double-truck street railway cars of 40-passenger capacity.

Central of Georgia Railway has ordered 500 new steel underframe freight cars to be delivered in the autumn.

Jacksonville Traction Co., Jacksonville, Fla., has ordered 15 double-truck cars from the American Car Co., St. Louis.

Laredo Electric & Railway Co., Laredo, Tex., is reported contemplating purchase of 3 storage battery electric street cars, about 24 feet long over all.

Charlotte Electric Railway Co., Charlotte, N. C., is expected in the market for 6 electric street railway cars each 38 feet long.

Will Soon Begin Construction.

A new financial plan has been adopted for the Hagerstown & Frederick Railway Co. Edward F. Peck, who has been president for over a year, has resigned, and Emory L. Coblenz of Frederick, Md., has again been elected to the presidency. New financial interests, it is stated, have become interested in the enterprise, and proposed construction that has hesitated for some time is expected to soon be undertaken. The company was lately granted an extension of time for the building of the branch from Jefferson to Brunswick, Md., seven miles.

Several new directors were elected in addition to the old board, the incoming members including James J. Alnutt, Adolph Sell, Howard M. Amos and F. Howard Warfield of Baltimore, Wm. P. Lane of Hagerstown, U. W. Harshman of Waynesboro, Pa., and several others near Frederick. Besides President Coblenz, the officers of the road are Henry Holzapfel, vice-president; Thos. H. Haller, treasurer; M. P. Moller, secretary; C. A. Hoag, assistant secretary and treasurer; executive committee, E. L. Coblenz, H. Holzapfel, Alexander Armstrong, Jr., Cyrus F. Flook and F. Howard Warfield.

Road to Be Sold.

A report from Monroe, La., says that Andrew A. Gunby, special master appointed as a result of foreclosure proceedings, announces that the Arkansas, Louisiana & Gulf Railroad franchises, rolling stock and equipment will be sold at auction, the upset price being \$200,000. The road is 61 miles long from Monroe, La., to Hamburg and Crossett, Ark. Alfred Cowles of Chicago is president; William A. Otis is vice-president, and C. E. Titus, secretary, both of Colorado Springs, Colo.

Receiver Appointed.

J. W. Fristoe, president of the T. J. Moss Tie Co., has, according to a report from Cape Girardeau, Mo., been appointed receiver for the Cape Girardeau & Northern Railroad upon the petition of Giboney Houck, son of Louis Houck, who built and formerly owned the line, which was acquired by a syndicate of St. Louis capitalists some months ago. R. H. Schultz is general manager of the road, which is 93 miles long from Ansell to Farmington, Mo., with a branch of eight miles to West Chester. J. H. Byrd of St. Louis is president.

Rolla to Anutt, Mo.

The Rolla, Ozark & Southern Railway Co. of Rolla, Mo., has been chartered to build a line from Rolla to Anutt, Mo., 18 miles. It will open up extensive mineral and timber lands which are now without railroad facilities. The authorized capital stock of the company is \$200,000, and the board of directors for the first year are F. W. Webb, J. Ellis Walker and E. W. Walker of Rolla, J. A. Frank of Anutt and E. C. Comstock of Lecom, Mo.

Kansas City to Topeka.

J. J. Heim of Kansas City, who is president of the Joplin & Pittsburg Railway, which connects Joplin, Mo., with Pittsburg, Kans., and other points in that State, will, it is reported, push construction immediately upon another electric interurban railway from

Kansas City, Mo., to Lawrence (34 miles) and Topeka, Kans. (62 miles). It is expected to have service as far as Bonner Springs, 16 miles, by June 1, and to Lawrence by December 1, and six months later to Topeka. Trolley wires have been erected from Kansas City to Bonner Springs, and the track is nearly finished. It is said that the route to Topeka will be five miles shorter than the steam railroads.

Adopts Electric Motive Power.

A report from Bryan, Tex., says that the Bryan-College Interurban Railway Co., of which O. E. Gammill is manager, has bought a complete power plant from Fairbanks, Morse & Co. of Chicago to convert the line to electric operation. Poles to support the overhead work have also been purchased, and work is in progress to set them up. Cars and other equipment are also to be obtained.

Trackless Trolley Proposed.

The establishment of a trackless trolley system of transportation is under consideration by the directors of Swope Park at Kansas City. If installed, it would cover five miles of roads. The total cost of installation under the conditions would, it is said, be not over \$54,000, which would include three cars costing \$6000 each. Cushion tires are used upon the wheels.

Railroad Notes.

J. Carroll Hughes has been appointed soliciting freight agent of the Georgia Southern & Florida Railway Co. at Macon, Ga.

The operation of the first train over the Tampa & Gulf Coast Railroad from Tampa to Clearwater, Fla., 33 miles, on April 16, was made the occasion of a celebration at Clearwater in which large numbers of visitors participated.

The Interstate Property Co., capital \$100,000, has applied for a charter at Nashville, Tenn., the incorporators being officials of the Louisville & Nashville Railroad, including President M. H. Smith, Vice-President W. L. Mapother, William W. Thompson, J. H. Ellis and C. J. Weis. Although no announcement was made, it is understood that the company is to own and hold real estate for railroad purposes.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

New England Cotton Mill Men.

At the annual meeting next week at Boston of the National Association of Cotton Manufacturers the program will include, in addition to an address of welcome by Governor David I. Walsh of Massachusetts, reply by R. M. Miller, Jr., of Charlotte, N. C., and the address of Edwin Farnham Greene of Boston, president of the association, the following papers:

"Why Does the Federal Government Take a Census of Cotton Manufactures for 1914?" by Williams M. Steuart, chief statistician for manufactures, national census bureau; "Efficiency and Cost of Doing Business," by John S. Lawrence, Boston, Mass.; "The Export Side of the Textile Industry," by John F. Fitzgerald, chairman foreign trade committee, Boston Chamber of Commerce, Boston, Mass.; "Opportunities for African Commerce in American Cotton Textiles," by Ralph M. Odell, commercial agent Department of Commerce; "Electric Power Contracts," by Prof. William L. Puffer, Boston, Mass.; "Textile Credits," by E. Howard Bennett, Boston, Mass.; "Cotton Type Standards," by Edward K. Cone, president New York Cotton Exchange; "Improved Methods in the Handling and Dyeing of Raw Cotton, Yarn and Piece Goods," by Louis J. Matos, Ph.D., New York city; "Systematic Supervision in Dyeing and Bleaching," by Andrew Fisher, Jr., Hyde Park, Mass.; "Methods of Reducing the Fire Hazards of Cotton Conveyors," by H. A. Burnham, Boston, Mass.; "Economy in Handling Material in Cotton Mills," by William F. Hunt, New York city; "Prevention of Decay in Mill Timbers," by F. J. Hoxie, Boston,

Mass.; "Uses of Compressed Air in Cotton Mills," by Charles C. Phelps, New York city; "Recent Developments in Incandescent Lamps and Their Application to Cotton Mill Lighting," by G. H. Stickney, vice-president Illuminating Engineering Society, Harrison, N. J.; "Mill Steam Plant," by A. G. Hosmer, M. E., Utica, N. Y.

The Cotton Movement.

In his report for April 10 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 222 days of the present season was 13,500,968 bales, an increase over the same period last year of 731,059 bales. The exports were 7,781,473 bales, an increase of 471,645 bales. The takings were, by Northern spinners, 2,204,569 bales, a decrease of 71,818 bales; by Southern spinners, 2,589,587 bales, an increase of 222,010 bales.

In the 229 days of the season the amount of cotton brought into sight was 13,621,630 bales, an increase over the same period last year of 707,214 bales. The exports were 7,881,910 bales, an increase of 471,343 bales. The takings were, by Northern spinners, 2,227,785 bales, a decrease of 73,749 bales; by Southern spinners, 2,628,779 bales, an increase of 215,405 bales.

To Add 5000 Spindles.

Longhurst Cotton Mills, Roxboro, N. C., will add 5000 spindles, and contract has been awarded for this machinery. At present the company has 10,128 ring spindles, 5664 twister spindles, 43 cards, etc., driven by electric power, with 200 operatives employed.

Bettie Francis Cotton Mills.

Bettie Francis Cotton Mills, Alexander City, Ala., decided to erect a building of brick construction and install 5472 spindles, with accompanying equipment, to manufacture extra carded double roving high-grade underwear yarns. This company's organization to build a 6000-spindle mill was lately noted. Benjamin Russell is president.

Skyland Hosiery Co.

Skyland Hosiery Co., East Flat Rock, N. C., will add 50 knitting machines, this installation to increase its mill's daily capacity from 700 to 1200 dozen pairs of hosiery and increase the number of its operatives from 200 to 250.

Textile Notes.

Tilton & Sons, Tilton, N. C., are reported as to add new machinery in their hosiery knitting mill.

Tilton & Sons, hosiery manufacturers, mentioned last week, are located at Tilton, N. H., not N. C.

Hartwell (Ga.) Mills will, it is reported, increase capacity. This company has 8000 ring spindles, 200 broad looms, etc.

W. W. Brown, Burlington, N. C., is reported interested in a plan to establish a knitting mill for women's and children's hosiery; to use 100x60-foot building.

Selma (N. C.) Cotton Mill will increase capacity, installing equipment to cost about \$75,000. This machinery will include 150-horse-power boiler, feedwater pump, open heater for 500-horse-power boiler, belting, shafting, etc.

Pasquotank Hosiery Co., Elizabeth City, N. C., has decided to erect an \$8000 building for its knitting mill, the installation of machinery to be for a daily capacity of 300 dozen pairs of hosiery. This company's organization with \$50,000 capital was recently noted.

Hawkinsville (Ga.) Cotton Mill Co., lately noted, has incorporated with \$100,000 capital stock and C. P. Gentry is president. It has purchased Southern Cotton Mill, and will undertake improvements, Park A. Dallis Company of Atlanta being consulting engineer.

Deibert Manufacturing Co., Elkton, Md., will organize with \$60,000 capital stock and succeed W. S. Deibert Company (Elk Mills, Md.) to occupy building being erected by Elkton Development Co. It will operate 30 looms for weaving curtains and couch covers. W. S. Deibert is president-manager and Elmore Deibert is treasurer.

MECHANICAL

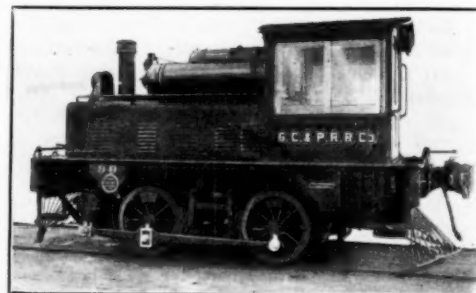
Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Gasoline Locomotive for the Georgia Coast & Piedmont Railroad.

Baldwin gasoline locomotives, built in accordance with patents granted to A. H. Ehle, have now been in service for several years, and it is stated that they have demonstrated their efficiency in light industrial and contractors' service. The success of these machines is stated to be largely due to the fact that they follow steam locomotive design where practicable and embody features which have proven successful in this class of power.

A Baldwin gasoline locomotive recently built for the Georgia Coast & Piedmont Railroad, Darien, Ga., by the Baldwin Locomotive Works, Philadelphia, Pa., is used in light switching and road service, and is capable of handling a load of 30 tons over considerable grades and curves of 300 feet radius. The track gauge is standard, and the locomotive has a nominal speed of six miles per hour on low gear and 12 miles per hour on high gear. The hauling capacity given above applies to the latter speed.

The locomotive is propelled by a four-cylinder, four-cycle, water-cooled engine of 50 horse-power nominal capacity. The power developed by the engine is transmitted to the wheels through a system of shafting, gearing and side rods. This furnishes a positive drive, with large journals and bearings throughout, and all the parts are designed to be of ample strength for severe



BALDWIN GASOLINE LOCOMOTIVE.

service. The engine and transmission are covered by a hood, on top of which the gasoline tank is placed. This tank has a capacity for 30 gallons, an amount sufficient to propel the locomotive a distance of 50 or 60 miles, under average working conditions.

The frames are steel castings of the bar type. The open construction of these frames facilitates the ventilation of the engine and the inspection of the transmission. This design of frame is very strong, and is also convenient for the suspension of the brake work, sand boxes and other fittings.

The locomotive is required to handle trunk line rolling stock, and its equipment has received special attention. Electric headlights, iron pilots and M. C. B. automatic couplers are provided at each end. Airbrake equipment is applied, air being furnished by a compressor driven from the main engine. The air reservoirs are mounted over the hood. Another important feature is a self-starter for the main engine. This is driven by an electric motor, which receives its current from a storage battery. The latter is automatically charged by a generator driven from the main engine. This battery also furnishes current for the headlights and cablights. The equipment also includes a hand brake, a bell, an air-operated whistle and four sand boxes with spouts to all the wheels.

Special attention has been given to the arrangement of the cab and cab fittings. The cab is roomy, with large side windows, and the fittings are so arranged that the operator can handle the locomotive without leaving his seat. Steps and grab-irons are arranged, as far as possible in accordance with the requirements of the Interstate Commerce Commission.

The appearance of the locomotive is strongly suggestive of steam practice. The effect is more pronounced because of the position of the muffler, which stands vertically and looks like a smokestack and produces quiet working of the locomotive.

These locomotives possess the advantages of lightness

for switching and industrial service, and can be handled by one man. Another advantage is that they consume no power while standing idle. Here the self-starter is particularly effective, as when the locomotive is idle for only short periods of time the engine can be stopped and started without labor on the part of the operator and waste of fuel or power.

The principal dimensions of the Georgia Coast & Piedmont locomotive are wheel-base, 4 feet 9 inches; wheels, diameter, 30 inches; journals, $3\frac{1}{4} \times 4\frac{1}{2}$ inches; width, 6 feet 6 inches; height to top of cab, 8 feet 6 inches; length, 13 feet 9 inches; weight, estimated, 14,000 pounds.

Preliminary trials have been satisfactory, and it has handled approximately twice the guaranteed tonnage.

The "One Fire" Asphalt Plant.

As the result of over 25 years of experience with various plants for road-making and other contractors' equipment, and with a view to meeting the requirements of an efficient and economical plant which may be moved in its entirety over considerable distances, Lawrence B. West, president of the West Construction Co., Chattanooga, Tenn., has designed, patented and built a portable plant known as the "One Fire" asphalt plant. It is manufactured by the One Fire Plant Co., 1001 Market Street, Chattanooga.

The outfit as shown in the accompanying illustration consists of all the various units required in the heating, mixing and pouring of asphalt and aggregates. One of the important features is that it may be easily placed on any railroad flat car from 36 to 40 feet in length without dismantling it. The car is run under the plant as shown, and the weight transferred to the car from the structural steel legs by which it is supported. The legs are then removed and the equipment is ready for transportation to any point required. The increasing number of important contracts obtainable in widely-separated sections of the country in street paving and road building make this feature of marked importance.

The plant is designed for a capacity of 1000 square yards of two-inch topping of either sheet asphalt, asphalt concrete or bitulithic. Its weight is 75,000 pounds.

The construction consists of the marine type of boiler (A); the asphalt kettle (B) jacketed over the boiler, with capacity of 40,000 pounds of asphalt; the Westinghouse cross-compound air compressor (C); the blower fan (D) for induced draft to drum; the dust collector (E); the sand bin (F) of three cubic yards capacity; the sand drum (G); the loading skip (H) for mineral aggregates; the asphalt mixer (I); driveway for wagon under mixer (J); the structural-steel legs (K), upon which the plant is supported; the American Blower Co.'s 45-horse-power steam engine (L); the hoist (M) for asphalt barrels to charge the kettles, and other parts as shown in the accompanying illustration.

The equipment is designed to be strong, and at the same time simple in operation. The boiler is built for 150 pounds steam pressure under Government specifica-

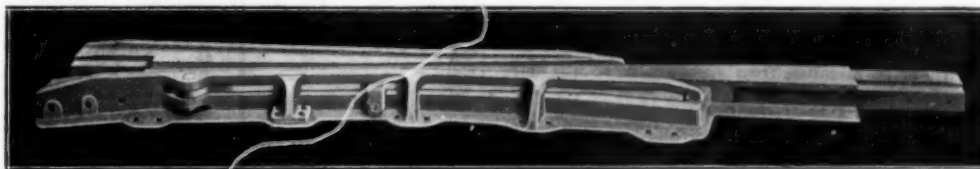
in the hopper, and one in the mixer at the same time.

It is believed that this equipment will meet a wide demand for a complete and at the same time easily portable asphalt plant.

Conley Big Terminal Spring Frog.

A new spring frog of manganese steel, for use at terminal stations, has been designed and patented by the Conley Frog & Switch Co. of Memphis, Tenn., which the company is manufacturing under the name of the Conley Big Terminal spring frog. It is shown in the illustration.

This frog is designed along the same lines as the Conley class "C" manganese frog, with the exception that the main line is given a solid bearing through the frog.



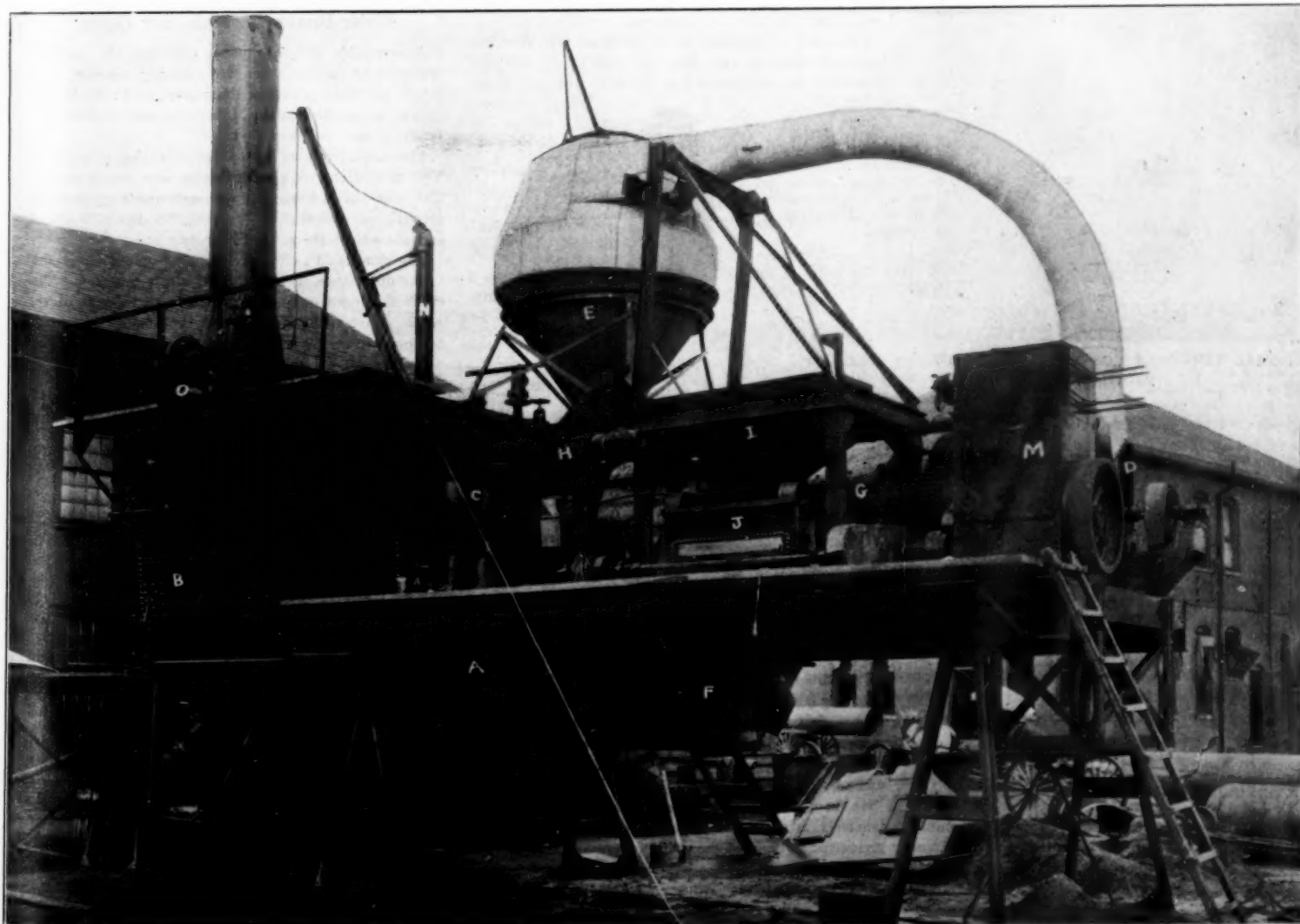
CONLEY MANGANESE STEEL SPRING FROG.

tions. The gears are steel cut, and each one is encased in order to be free from dust.

In operation, the radiated heat from the boiler heats the asphalt, and the boiler is insulated at the same time by the asphalt. The mineral aggregates are heated by the flame from the boiler furnace drawn through the drum. The asphalt is agitated by air or steam, and is conveyed to the asphalt bucket on scales at the mixer. The mineral aggregate is conveyed to the drum by a mechanical elevator. The screen is on the outside of the drum, and the aggregate drops upon it and is separated into compartments for aggregate of different sizes. The hot mineral aggregate is drawn into the hoisting skip resting on the platform scales to weigh the required proportions. The batch of 10 cubic feet of mineral aggregate, properly proportioned, is hoisted into the hopper, so that there is one batch in the skip, one

The separate guard rails are entirely eliminated. The ensers at the toe of the frog and the riser at the heel of the frog lap over the joints about 18 inches, thus doing away with pounding at the joints.

It is so designed that snow and ice should not interfere with traffic in any way. The spring is encased under the frog, so that it cannot be interfered with by dragging or brake beams. Wheels are guided through the frog by the tread rim engaging the elevated guide rails that are a part of the frog itself. The guide rail on the spring wing side is so designed that it holds the spring rail in place in such a manner that double flange wheels will not throw the spring rail out of place, and, in the event the spring rail breaks, the frog would be safe, as it would then act as a rigid frog. Spike flanges are cast to the base of rail, so that the inside spikes give the same amount of holding power as the outside spikes.



THE NEW "ONE-FIRE" PORTABLE ASPHALT PLANT.

This anchors the frog to the ties, so that it will not have a tendency to creep toward the head block. Creeping of spring wing is also prevented, as the wing is held in place by a large steel pin at hinge end.

The spring wing is manganese, two inches deep by five inches wide, giving ten square inches area, or slightly more than the cross-section of a 100-pound rail. The spring wing rests on a solid base, and when traffic is practically all on one track, the spring rail side of frog does not become lower than the rigid side.

The "Big Terminal" spring frog requires no loose foot guards, and its construction is such that switchmen or trainmen will not be hindered in their work.

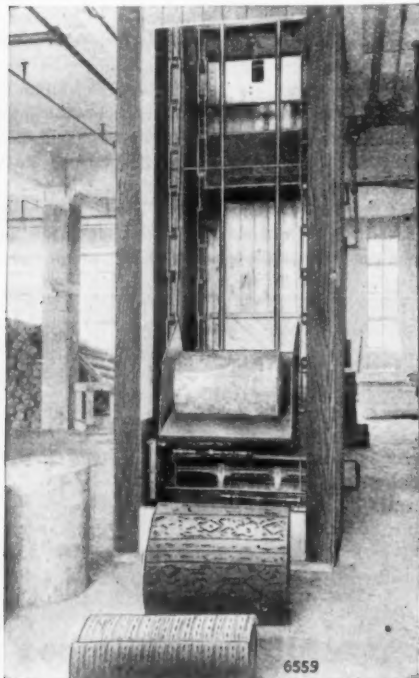
The simplicity of this frog results from absence of body bolts, loose castings and plates. The guide rails have an easy spiral at each end to prevent shock to wheels either in an approaching or trailing direction.

The Conley Frog & Switch Co. exhibited the Big Terminal spring frog at the Maintenance of Way Convention in Chicago, where it was reported to have attracted much attention from maintenance of way officials and trackmen.

Link-Belt Elevators in Industrial Plants.

The efficiency and economy of elevating and conveying machinery in the handling of factory materials is illustrated in one of the mills of Philadelphia for making carpets, for which the Link-Belt Company of that city recently installed a combined elevator and lowering conveyor of special construction.

The problem was to provide a machine to serve six



SPECIAL LINK-BELT CONVEYOR IN CARPET FACTORY.

floors of a factory and permit rolls of carpets or rugs to be loaded on at any floor and discharged at any other floor either going up or going down. The illustration shows the roll carried in a steel tray hung between two steel Link-Belts, the pan of the tray being pivoted and supported in such a way that on coming in contact with a lever controlled from the outside of the casing the pan tips, discharges its load and then rights itself ready to take a new load. The trays are arranged in pairs, one to dump on the going-up side, the other to dump on the going-down side. Between each pair there is room to take a rolled-up rug on end, and at floors where rugs are discharged roller skids are arranged to receive them. The machine is 75 feet high, has a capacity of four rolls per minute, and is driven by a five-horse-power motor.

Combination Jaw and Roller Crusher.

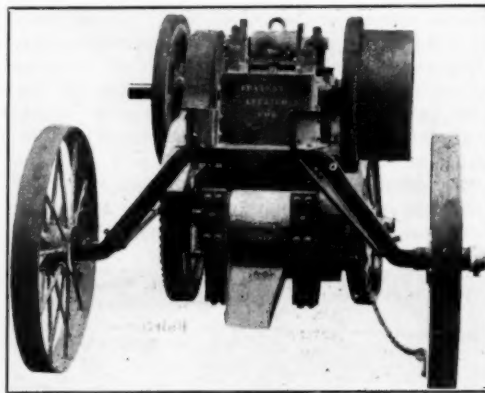
A new machine has been developed and is manufactured by the Knoxville Foundry & Machine Co., Knoxville, Tenn., which combines the operations of crushing and pulverizing, so that the use of separate machines is eliminated.

The crusher and pulverizer shown in the illustration takes the sprawls right from the quarry, crushes them

and then pulverizes the crushed stone. The capacity is 15 tons of agricultural lime dust a day.

When required, the roller section of the equipment may be used for turning out macadam stone for farm roads when not making lime dust for fertilizer purposes.

The outfit is portable, and can be transported by one



CRUSHER AND PULVERIZER IN ONE MACHINE.

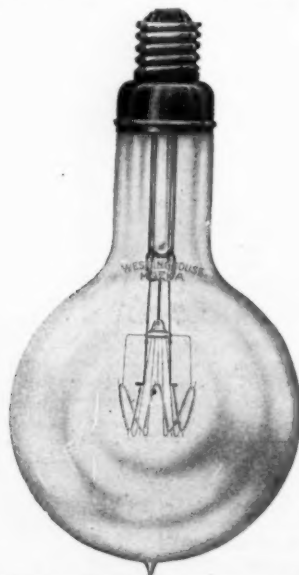
team. It weighs approximately 7500 pounds, and is run by a 12-horse-power engine. It is estimated that one machine will supply the requirements of a wide neighborhood for pulverizing agricultural lime and breaking up stone for macadam roads.

Improved Mazda Incandescent Lamps.

The Westinghouse Lamp Co., 1261 Broadway, New York, is manufacturing an improved type of lamp to meet the demand for an incandescent lamp of high candle-power and high efficiency. Tests of this lamp show that it operates at the efficiency of approximately .6 watt per candle-power.

As noted in the illustration, the filament in the lamp consists of a closely coiled tungsten wire supported by anchors. The lamps are made in 750 and 1000 watt sizes for 100 to 130 volt circuits; the 750 watt giving approximately 1100 candle-power and the 1000 watt approximately 1650 candle-power.

The color of the light given by these new Westinghouse Mazdas is such that it approaches sunlight. The lamp can be operated on direct or alternating cir-



IMPROVED WESTINGHOUSE MAZDA LAMP.

cuits of any frequency in commercial use. On account of the intense brilliancy of the filament, it is desirable that the lamps be used with some kind of diffusing reflector, and they are particularly adapted for indirect or semi-direct lighting. Trial installations have proved that the lamps are reliable and that satisfactory life and service are obtained.

It is expected that these lamps will be used extensively in mills and factories for illuminating large areas. It is claimed that they reduce the cost of light considerably, a feature of interest to factory and mill managers.

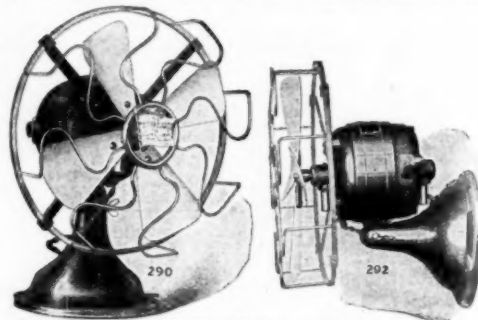
The Westinghouse Lamp Co. has issued a bulletin giving full information in regard to the new lamps, copies of which will be sent on request to the company.

New Robbins & Myers Electric Fans.

The new eight-inch direct-current desk and bracket fan developed by the Robbins & Myers Company, Springfield, O., for the season of 1914 is shown in the accompanying illustrations.

This fan is made for both 110 and 220 volt direct-current circuits. By means of a speed regulating coil and switch in the base, three speeds can be obtained: 1700, 1400 and 1000 revolutions per minute. At these speeds the respective watts are 25, 20 and 15.

A hinge joint provides for trunnion adjustment, adapting the fan for either desk or bracket service. The blades are made of sheet brass, and are riveted to a punched carrier which is formed to give a uniform pitch to the blades, the pitch being designed to give



ROBBINS & MYERS DESK OR BRACKET FAN.

maximum air displacement with minimum power. A strong, durable guard surrounds the blades and is fastened to the body by four steel supports, which are fastened rigidly by screws.

The frame and base of the motor are finished in baked black enamel with fine gilt stripes. The blades are brushed brass finish and lacquered. In all details the fan is designed to be strongly built, to run quietly and to meet the needs of the home or office where larger fans are not desired.

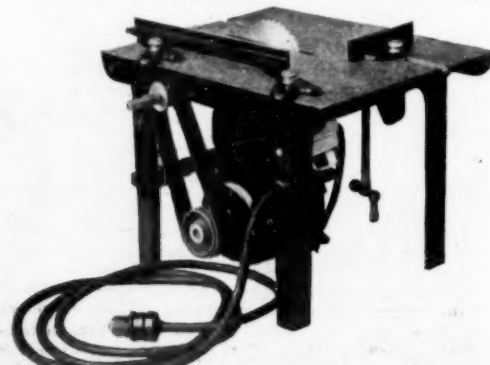
This fan is illustrated and described in connection with other products of the 1914 "Standard" line in a catalogue just issued by the Robbins & Myers Co., a copy of which will be mailed on request.

Motor-Driven Portable Saw Outfit.

A saw table with equipment complete, that may be operated by power from an ordinary electric lamp socket, has been placed on the market by F. W. Lieberknecht & Co., Brookline, Mass., the sales manager for H. G. Crane, the manufacturer.

The outfit is shown in the accompanying illustration. The main frame of the saw table is a single casting. The iron top is hinged at one end, and may be tilted through various angles. This top is carefully placed and the adjustable guides accurately fitted.

The motor and switch are mounted on the under side of the dust chute, so that they are fully protected. The chute is hinged at one end, so that the weight of the motor serves to tighten the belt, the amount of tension being regulated by the thumb-screw. The motor, oper-



METAL-TABLE PORTABLE SAW OUTFIT.

ated from a lamp socket, has sufficient power to drive the saw through hardwood two inches thick, and with a change to a metal-cutting saw it will cut brass and the softer metals. It is stated that a piece of brass 1x1 inch can be cut through in 15 seconds.

The table is fitted with a Holtzer-Cabot motor for either 110 or 220 volts alternating or direct current, as required, made by the Holtzer-Cabot Electric Co., Brookline, Mass.

The table is 12½ inches high, the top 18x17 inches, and the weight, complete, is 70 pounds.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Hamilton.—Marion county, Mack Pearce, Probate Judge, will let contract Apr. 25 to construct steel bridge across Butahatchie River; 385 ft. long; stone, concrete or cylinder pillars.

Ala., Pratt City.—Birmingham, Ensley & Bessemer R. R. Co., Geo. I. Brown, V.-P., Birmingham, let contract to Phoenix Bridge Co., Phoenixville, Pa., for lately-noted viaduct construction; bridge to cost \$7000; accompanying improvements \$30,000; one 125-ft. and three 50-ft. spans; L. W. Ross Supt. R. E. & B. Co., Engr.

Ark., El Dorado.—Union county will construct 6 steel bridges; W. M. Van Hook, County Judge, will let contract at public auction on Apr. 30.

Fla., Bradentown.—Manatee county will make alterations to bridge No. 1 on Braden Creek; bids until May 4; plans and specifications at office Robt. H. Roesch, Clerk. (See Machinery Wanted.)

Fla., Melbourne.—Brevard County Commissioners let contract at \$7000 to Lightman, McDonald & Co., Jacksonville, Fla., to construct bridge; 629 ft. long, with section of concrete 192 ft. long and 18 ft. wide in center. (Lately noted.)

Ga., Clyde.—Bryan County Comms., J. B. Bashor, Commr., will build bridge across Canoechee River; 575 ft. long; 14 ft. wide; caps 12x12, cypress heart two-thirds; round cypress post dipping 12 in. at top or small end and to be two-thirds heart; flooring of bridge to be of 3-in. heart cypress and to be laid three-quarters in. apart; bridge elevated 2 ft. above level of land abutting; bids until May 4. (See Machinery Wanted.)

Ga., Howard.—Taylor county will construct steel bridge with reinforced concrete abutments and concrete floor; 150 ft. long; contract let May 10 at Butler, Ga.; plans and specifications at office H. P. Wallace, Clerk. (See Machinery Wanted.)

Ky., Hazard.—Perry County Comms. will construct 4 bridges at Hazard, Chavies, Leatherwood and Buckhorn.

Ky., Hodgenville.—Larue County let contract to Champion Bridge Co., Wilmington, O., to erect lately-noted bridge; steel; concrete abutments; concrete floor; cost about \$3750.

La., Lafayette.—Lafayette Police Jury, Geo. Crouchet, Secy., will erect wooden

bridge across Goulee Isle des Cannes; contract let locally. (Lately noted.)

Mo., Kingston.—Caldwell county and Southern R. R., S. C. Rogers, Chief Engr., will construct 120-ft. bridge across Shoal Creek and 30-ft. bridge across Tom Creek.

N. C., Shelby.—O. M. Mull and others interested in proposed railroad between Shelby and Casar, N. C.; have plans, including erection of one 200-ft. and two 100-ft. bridges. (See Machinery Wanted.)

Okla., Hobart.—Kiowa County Comms. let contracts to Vincennes Bridge Co., Vincennes, Ind., at \$4500, to construct superstructures of 9 steel bridges, Nos. 173 to 181, inclusive, to T. G. Scorer, Snyder, Okla., at \$4000 for substructures.

Okla., Salina.—Salina township will erect \$20,000 bridge; length 700 ft.; piers 50 ft.; Hedrick & Cochran, Engrs., Kansas City, Mo. (Bonds lately noted voted.)

Tenn., Chattanooga.—Tennessee River Bridge Com., Theo. F. King, Chrmn., Hamilton County Courthouse, let contract Nashville Bridge Co., Nashville, Tenn., at \$58,800 to repair Walnut St. bridge; place new iron stringers, creosoted timbers and wooden flooring soaked in creosote; contract includes all work but painting, which will cost \$5000 additional; L. B. Bryan, County Engr. (Bids and further facts lately noted.)

Tenn., Georgetown.—Hugh Randolph, R. T. Gamble and others are members of committee to construct bridge; cost \$2600; bids opened Apr. 13. (Meigs county Quarterly Court lately noted, Tenn., Decatur, to construct iron bridge near Georgetown.)

Tex., Belton.—Bell County Comms. let contract Hess & Skinner of Dallas to construct 60-span steel bridge over Knob Creek on Heidenheimer-Burgess Rd. in Heidenheimer-Burgess Precinct.

Tex., Brownwood.—Brown County Comms. let contract to Hess & Skinner, Dallas, Tex., for 5 steel bridges across various streams.

Tex., Heidenheimer.—Good Roads Com. let contract to Hess & Skinner Engr. Co., Dallas, Tex., for several steel bridges.

Tex., Houston.—Harris County Engrs. will prepare plans and specifications for bridge over Big Cypress Creek on Hockley and Katy Rds. Address County Comms.

Tex., Houston.—Harris county, H. L. Washburn, Auditor, will construct bridge on N. Main St.; 150 ft. long; concrete; bids until

May 4; Howe & Wise, Engrs., First National Bank Bldg., Houston; lately noted. (See Machinery Wanted.)

Tex., Kaufman.—Kaufman County Comms. let contract to Hess & Skinner Engr. Co., Dallas, Tex., for 15 steel bridges.

Tex., Luling.—Caldwell and Guadalupe County Comms. let contract at \$12,444 to construct steel bridge across San Marcos River. Address Caldwell County Comms. at Lockhart, Tex., or Guadalupe County Comms. at Seguin, Tex. (Lately noted.)

Tex., San Antonio.—City will construct 2 concrete bridges and remove and re-erect 2 iron bridges; bids until May 11; later will construct concrete bridges to cost \$100,000; Fred Fries, City Clerk. (See Machinery Wanted.)

Va., Fairfax.—State Highway Com., G. P. Coleman, State Highway Engr., Richmond, Va., will construct 3 concrete-steel bridges in Fairfax county as follows: One over Piney Branch, 30 ft. long; one over Sherwood Branch, 20 ft. long, and one over Dogue Run, 20 ft. long; all to have 16-ft. roadway; concrete substructures; bids until May 6 at office of County Clerk; lately noted. (See Road and Street Work and Machinery Wanted.)

Va., Monterey.—Highland county will construct 37-ft. bridge across Crab Bottom Creek, New Hamoden; steel; 27-ft. span; concrete (alternate bid on cement rubble); also 54-ft. Vanderpool Bridge; 2 spans, 27 ft.; bids until May 4; G. P. Coleman, State Highway Engr., Richmond, Va. (See Machinery Wanted.)

Va., Richmond.—Administrative Board instructed Chas. E. Bolling, City Engr., to invite bids until May 5 to reconstruct and repair Ninth-street bridge; cost about \$50,000. (Lately noted.)

Va., Norfolk.—Norfolk County, J. J. Dalton, Road Engr., Royster Bldg., will construct highway bridge across East Canal, Providence Rd., Washington Dist.; Nine-Mile bridge near Bowers Hill, Western Branch Dist., and repairing Dock Creek drawbridge, Western Branch Dist.; bids until Apr. 27. (See Machinery Wanted.)

W. Va., Fairmont.—Little Kanawha Syndicate Lines (Buckhannon & Northern R. R., S. D. Brady, Ch. Engr., Morgantown, W. Va., let contract Gilmore Weaver Co. for substructure, and to McClintic-Marshall Co., Pittsburgh, for superstructure of bridge across Monongahela River; 300 ft. single track through span, 2 140-ft. deck Warren truss spans and 4 95-ft. deck girder spans; substructure consists of concrete piers containing about 7500 cu. yds. masonry; superstructure contain 1500 tons of steel; complete substructure by July 15; superstructure Nov. 1. (Previously noted.)

W. Va., Morgantown.—Morgantown & Wheeling R. R., Robt. D. Hennen, Chief Engr., will construct 7 steel bridges and culverts.

CANNING AND PACKING PLANTS

Fla., Eustis.—Eustis Canning Co., capital stock \$10,000, inctpd. with E. J. Caldwell, Prest.

Md., Oxford.—W. H. Valliant and Kirby & Gallup are reported to establish herring-roe packing plant.

Mo., St. Louis.—Best-Clymer Mfg. Co., 1425 International Life Bldg., increased capital stock from \$10,000 to \$250,000.

Tenn., Cleveland.—Bradley Packing & Cold Storage Co. organized; G. T. Hall, Prest.; L. D. Campbell, Secy.; W. F. McIntire, Treas.; will operate plant for storing eggs and packing meats; plant equipped. (Lately noted inctpd., \$20,000 capital.)

W. Va., Wheeling.—Paul P. Reymann Packing Co. has elected Paul O. Reymann, Prest.; Anton Reymann, V.-P., and Conrad Hirsch, Secy.-Treas.; will remodel Reymann Brewing Co.'s plant and install packing and storage plant, expending \$125,000 to \$150,000; let contract to R. Kitchen Co. at \$77,000, including stone, cement, brick, structural iron and carpentry work; C. H. A. Wannewetsch & Co., Archts., Buffalo, N. Y. (Lately noted.)

CLAYWORKING PLANTS

N. C., Old Fort.—Bricks.—Old Fort Mfg. Co., capital \$25,000, inctpd. by I. H. Greene, R. L. Murphy and others.

Tex., Dallas.—Bricks.—Brown Brick Co., capital stock \$5000, inctpd. by G. C. Brown, E. D. Brown and Octavia Brown.

Va., Houston.—Bricks.—Bastion Brick Co. will enlarge plant; install steam shovel; capacity to be 50,000 brick daily. (See Machinery Wanted.)

COAL MINES AND COKE OVENS

Ala., Burnwell.—Burnwell Coal Co., Birmingham, Ala., is reported to open 3 additional coal mines, increasing present daily capacity of 400 tons.

Ala., Gadsden.—J. M. Elliott is testing coal veins on 30,000-acre coal-land tract on Blount Mountain; view to development. Ky., Coxton-Lick Branch Coal Co. (John W. and Dover Williams), Pineville, Ky., purchased 2500 acres coal land on Clover Fork of Cumberland River, power plant, mining town of Coxton, etc.; reported as planning extensive increases of output.

Ky., Edmondton.—Iron.—Premier Products Co., capitalized at \$300,000, organized by Arthur Cobb and others of Bowling Green, Ky.; will mine coal and iron.

Ky., Pikeville.—T. N. Huffman (not T. N. Huffman Coal Co., lately noted inctpd., \$15,000 capital) will develop 65 acres; daily capacity, 50 tons coal.

Mo., Midway, R. F. D. from Columbia.—John Newlin and others are reported contemplating development of coal mines on lease of American Lead, Zinc & Smelting Co.

Okla., Tulsa.—Coal Creek Oil & Coal Mining Co., capital \$10,000, inctpd. by J. W. Whitney, John J. H. Sykes and E. M. Whitney.

Tenn., Chattanooga.—John R. Barnes Coal Co. increased capital stock from \$50,000 to \$100,000 and changed name to Kentucky-Tennessee Coal Co.

Tenn., Knoxville.—Royal Coal & Coke Co. increased capital stock from \$100,000 to \$300,000.

Tenn., Whiteside.—New Etna Coal Co. has developed to extent several miles of prospecting; continued improvements of equipment and operation; located Etna black-smith coal in tract of 400 acres; developments now pending with view to shorten haul, now 6 mi., from mines.

W. Va., Logan.—Island Creek Coal Co. organized by J. J. Ross, A. C. McConaughy and others; leased 800 acres coal land on Main Island and Creek; will develop. (A. McConaughy, J. J. Ross and others lately noted as having organized company.)

CONCRETE AND CEMENT PLANTS

Ala., Montgomery.—Concrete Columns, etc. Southeastern Concrete Products Co., T. A. Davies, Prest., will erect 2 additional frame buildings, each 100 ft. square.

Ga., Newnan.—Cement Vaults.—Georgia Cement Burial Vault Co., capital stock \$5000, inctpd. by C. M. Amis and W. M. Camp; to mfr. cement vaults.

COTTON COMPRESSES AND GINS

Ark., Argenta.—C. P. Reid, Herman Kahn, Alfred Kahn, O. P. Robinson, C. N. Alexander, F. B. T. Hollenberg and others purchased property (including gins) of Rose City Cotton Oil Co.; will erect 6-press oil mill on site of former burned mill; Mr. Reid, Mgr. and in charge of construction.

Ga., Doerun.—Doerun Oil Mill Co. will install additional boiler, engine and outfit for four 70-saw gins; machinery purchased.

Ga., Lafayette.—Planters' Gin Co. will establish 6-stand gin; A. B. Rainey of Summerville, Ga., is Secy.

Ky., Columbia.—E. W. Avey is interested in proposed cotton gin and broom factory.

N. C., Mooresville.—Imperial Cotton Oil Co., Statesville, N. C., contemplates erection of gin building and addition of four 70-saw gins; operate by electric equipment now used in oil mill and install steam power in latter; also contemplates building additional warehouse for seed and mill products. (See Cottonseed-oil Mills.)

S. C., Gaffney.—Victor Cotton Oil Co. will install four 80-saw air-blast outfit and 100-ton track scale; also erect 40x50-ft. extension to fertilizer warehouse and enlarge office building, 15x25 ft.; cost of improvements \$10,000; contracts let.

Tenn., Trezevant.—H. Argo & Son will probably rebuild cotton gin reported burned.

Tex., Clinton.—Nelms-Kehoe Dock Co. will construct compress, classing shed and warehouses; to include new Webb compress; classing shed 125x700 ft.; gravel and shell

floor; corrugated-iron sides and saw-toothed roof; capacity 5000 bales cotton; also 2 warehouses, 200x250 ft., each with capacity 5000 bales, giving 15,000 bales capacity to development; warehouses to have brick walls; tar and shell roof; excavation and construction of workmen's houses begun; cost of plant \$125,000. (Previously noted.)

Tex., Como.—Como Light & Gin Co., capital stock \$8000, incptd. by W. D. Moore, E. R. Crone and B. E. Morris.

Tex., Lockhart.—J. R. Rinsinger is reported as contemplating installation of cotton gin.

Tex., Rockwall.—Woods Gin Co., capital stock \$6000, incptd. by J. J. Austin, Claude Isbell and B. F. Holford.

Va., Richmond.—Standard Compress & Warehouse Corp., authorized capital \$2,000,000, chartered; Andrew Christian, Pres.; H. H. Chalkley, Secy.; Ernest B. Filppen, Treas.

COTTONSEED-OIL MILLS

Ala., Collinsville.—Inter-State Oil & Fertilizer Co., 1825 Jefferson County Bank Bldg., Birmingham, Ala., will build oil mill and fertilizer mixer; cost \$50,000. (See Ala., Odenville.)

Ala., Cullman.—Inter-State Oil & Fertilizer Co., 1825 Jefferson County Bank Bldg., Birmingham, Ala., will build oil mill to cost \$25,000. (See Ala., Odenville.)

Ala., Odenville.—Inter-State Oil & Fertilizer Co., C. O. Jagers, Gen. Mgr., 1825 Jefferson County Bank Bldg., Birmingham, Ala., advises as follows: Building oil mill and fertilizer mixer at Odenville, cost about \$30,000; one at Collinsville, Ala., cost \$50,000; oil mill at Cullman, Ala., cost \$25,000; planning to establish 3 other mills in time to crush this year's crop.

Ark., Argenta.—C. P. Reid and others purchased property of Rose City Cotton Oil Co.; gins included. (See Cotton Compresses and Gins.)

Ga., Donaldsonville.—Donaldsonville Oil Mill will install seed-cleaning machine.

Ga., Tifton.—Planters' Cotton Oil Co. will erect additional storage oil tank.

La., Homer.—Homer Cotton Oil Co. contemplates extension of 2-story main building; addition of brick and contain 6 additional linters; also new fertilizer plant, including building and mixing machinery.

N. C., Mooresville.—Imperial Cotton Oil Co., Statesville, N. C., contemplates building additional warehouse for seed and mill products; install steam power—Corliss engine and additional boiler. (See Cotton Compresses and Gins.)

N. C., Raleigh.—Raleigh Cotton Oil Co., authorized capital stock \$100,000, incptd. by John C. Drewry, Graham H. Andrews, Jas. J. Towler and others; ordered machinery for cottonseed-oil mill. (Lately noted.)

Okla., Boswell.—Boswell Oil Mill Co. is reported to build cottonseed-oil mill.

Okla., Ringling.—Ringling Cotton Oil Co., capital \$50,000, incptd. by S. B. Burnett, Fort Smith, Ark.; Robert F. Scivally and C. T. Barringer of Ardmore, Okla.

Tex., Alto.—Alto Cotton Oil Co., capital stock \$25,000, incptd. by F. F. Florence, H. H. Berryman and M. J. Hogan.

Tex., Rule.—Rule Cotton Oil Co. will erect 80x200-ft. seedhouse to cost about \$10,000; construction directed by H. V. McElreath, Supt.; will install unloading machinery. (See Machinery Wanted.)

Tex., Fort Worth.—Riverside Cotton Oil Co. will install hydraulic system for mill and abandon present cold-press system using 10 propellers; let contract French Oil Mill Machinery Co., Piqua, O., for 5-press mill, including cookers, rolls, former, accumulators, pumps, valves, presses, etc.

Tex., San Antonio.—Russell-Coleman Cotton Oil Co. will install complete pressroom equipment, including presses, cookers, power pumps, accumulators, crushing rolls, cake former, cake stripper, etc.; let contract French Oil Mill Machinery Co., Piqua, O. (R. R. Russell and others lately noted to erect 100-ton cottonseed-oil mill costing \$100,000.)

Tex., Schulenburg.—Schulenburg Oil Mill, G. A. Baumgarten, Prop., proceeding with improvements; constructing concrete and steel 28x42-ft. oilhouse (to be used later for refinery); rebuilding 60x122-ft. seedhouse, and placing galvanized-iron roof; has completed repairs to main building and installed machinery; also building concrete and steel 60x62-ft. warehouse for cake and flour; improvements completed and under construction to cost \$10,000; later may install steel tanks, etc.; F. Bohlmann, Contr. (See Flour, Feed and Meal Mills.)

Tex., Texas City.—P. A. Fitzhugh, Box 1384, Houston, Tex., and associates will soon

organize company to build plant recently mentioned; will install 100-ton 5-press cottonseed-oil mill with extensive meal grinding capacity; reported to cost \$200,000. (Lately noted, with building details, etc.)

Tex., Valley Mills.—Sidney Webb and others purchased Valley Mills Cotton Oil Co.'s plant and will increase to 3-press mill.

DRAINAGE SYSTEMS

Ga., Monroe.—Jacks Creek Drainage Dist. let contract W. H. J. J. and J. R. Nunally at \$15,998 to construct main canal and 5 laterals; 152,310 cu. yds. earth and 1906 cu. yds. stone excavation. (Previously noted.)

La., Kinder.—Kinder Drainage Dist. No. 2, T. T. Nixon, Pres. (lately noted authorizing \$85,000 bonds), will construct 4 main canals with laterals and branches; about 573,000 cu. yds. earth removal; construct 1 and remove and reconstruct 3 main-line railroad trestles, and remove and reconstruct 2 log tram trestles; bids until May 18; L. M. LaFleur, Secy. (See Machinery Wanted.)

La., New Iberia.—Ira Pierce of Port Barre, La., and others are reported as contemplating construction of 1 ml. canal from Grand Lake to Bayou Teche and open old channel of Bayou Choupique from Teche to Gulf of Mexico; provide drainage for thousands of acres near Gulf; estimated cost \$100,000.

Mo., Charleston.—Drainage Dist. No. 20 let contract A. V. Willis & Sons, Paragould, Ark., at \$51,316 to construct drainage canals; 286,000 cu. yds. dredging, 73 acres clearing and 600 cu. yds. concrete construction.

S. C., Orangeburg.—Pettus Branch Drainage Dist. (comprising about 2000 acres) will widen and deepen present 2-ml. canal and construct (about) 2-ml. extension; G. H. Harvey of Holly Hill, S. C., member Board of Viewers. Address Dr. S. P. Wells, Holly Hill. (Lately noted.)

S. C., Orangeburg.—Rum Neck Drainage Dist. (lately noted) will contain about 3000

Fla., Leesburg.—Leesburg Ice Co. will enlarge electric-light plant.

Ga., Blakely.—City contemplates purchasing and installing boiler-feed pump, motor-driven fire pump, incandescent series lamps, several station-type recording wattmeters, with current and potential transformers for same. E. R. Adams, Supt.

Ga., Caldwell.—City will establish electric-light plant. Address The Mayor.

Ga., Pelham.—City voted \$4000 bonds to extend light and water system. Address The Mayor. (Lately noted.)

Ky., Burgin.—W. J. DeBaun, Perryville, Ky., will organize company to install lately-noted electric and ice plant.

Ky., Fulton.—Fulton Electric Light & Power Co. contemplates improving plant.

Ky., Hodgenville.—O. L. Herron, Liberty, Ky., is reported to have purchased electric-light plant and to enlarge.

Ky., Hodgenville.—E. L. Herren, Liberty, Ky., purchased and will improve plant of Hodgenville Lighting Co.; install ice plant.

Ky., Horse Cave.—Horse Cave Light & Power Co. will build 4-stand 50-hp. flour mill; ordered machinery.

Ky., Shepherdsville.—Shepherdsville Electric Light, Water & Ice Co., S. W. Bates, Pres., let contract to install machinery; erect ordinary construction buildings; size and cost not determined. (Lately noted organized, \$10,000 capital, acquiring plant, etc.)

La., Melville.—City, L. J. Williams, Mayor, engaged Anderson Offutt, 439 Carondelet St., New Orleans, La., as Engr. for electric-light plant; will vote May 12 (not May 2, as lately stated) on \$15,000 bonds.

Md., Baltimore.—Consolidated Gas, Electric Light & Power Co., Lexington and Liberty Sts., let contract Cowan Building Co., 106 W. Madison St. to erect power-house at Pumphrey's Station.

Miss., Ramsay Springs (not a P. O.).—Ramsay Mineral Springs Co., capital stock

ton, D. C., has plans for enlarging plant on river front; erect addition to main power-house and install additional turbine engine, with other machinery, doubling capacity.

Va., Grundy.—Grundy Light & Power Co., capital \$10,000, incptd. by E. E. Smith, Pres.; Tolby Belcher, Secy.-Treas.; S. R. Hurley, V.-P.-Mgr.; install electric-light and ice plant; buildings to cost \$1000 to \$2000.

Va., Lynchburg.—Southern Ry., B. Horman, Ch. Engr., Washington, D. C., contemplates, it is reported, erecting power-house to generate electricity to operate block signals and building and equipping substations at other points.

Va., Richmond.—National Securities Corp., capital stock \$1000 to \$2,500,000, chartered to act as holding company, build electric plants, construct water-works, etc.; Murray M. McGuire, Pres.; Thos. P. Bryan, V.-P.; John S. Eggleston, Secy.-Treas.; not prepared to announce further facts.

W. Va., Morgantown.—Morgantown & Wheeling R. R., Robt. D. Hennen, Chief Engr., will erect 2 substations in connection with construction 15 ml. trackage, Morgantown to Wheeling, W. Va.

FERTILIZER FACTORIES

Ala., Collinsville.—Inter-State Oil & Fertilizer Co., 1825 Jefferson County Bank Bldg., Birmingham, Ala., will build oil mill and fertilizer mixer. (See Cottonseed-oil Mills, Ala., Odenville.)

Ala., Odenville.—Interstate Oil & Fertilizer Co., 1825 Jefferson County Bank Bldg., Birmingham, Ala., will build oil mill and fertilizer mixer. (See Cottonseed-oil Mills.)

Ga., Ashburn.—Ashburn Oil Mills will probably rebuild fertilizer plant burned at loss of about \$20,000.

La., Boyce.—Boyce Cotton Oil & Mfg. Co., W. P. Hayne, Pres. and Mgr., contemplates construction of fertilizer mixing plant for coming season.

La., Homer.—Homer Cotton Oil Co. contemplates erection of fertilizer plant, including building and mixing machinery. (See Cottonseed-oil Mills.)

N. C., Kelford.—Kelford Fertilizer Co., capital stock \$50,000, organized by W. R. Brown and others.

N. C., Mt. Holly.—Piedmont Electro-Chemical Co., capital stock \$100,000, organized; Pres.-Treas., E. R. Bucher; Secy., D. C. Carmichael; Mgr., S. Hechenbleikner; all of Charlotte; will erect 250x80 and 150x80-ft. buildings of wood construction; install grinding machinery for phosphate rock, electric furnaces, transformers, mixer and pumps, all partly purchased; daily capacity, 60 tons 50 per cent. double phosphate. (Lately noted incptd., under Miscellaneous Factories, at Charlotte; also same as electro-chemical company lately reported to be organized by Southern Power Co., Charlotte.)

S. C., Florence.—City let contract to Florence Electric & Utility Co. to install complete system of street lighting.

S. C., Townville.—Fork Township Oil Mill, T. B. Jones, Mgr., contemplates installing machinery for fertilizer mixing plant. (See Machinery Wanted.)

Tex., Texarkana.—Texarkana Cotton Oil Co. will erect fertilizer plant; daily capacity 150 tons; erect brick, concrete and steel building; cost \$10,000.

Va., Spouth Hill.—Farmers' Union Fertilizer Co., capital stock \$75,000, organized with Ralph Jesseup, Pres.; J. J. S. Cook, V.-P.; A. M. Crute, Secy.-Treas.

FLOUR, FEED AND MEAL MILLS

Ky., Clinton.—Star Milling Co., J. U. Kevill, owner, Mayfield, Ky., will build flour mill, with daily capacity 200 bbls., to replace burned plant; also erect concrete grain elevator with 75,000 bus. capacity. (Lately noted.)

Ky., Lebanon.—Lebanon Milling Co. incptd. with \$9000 capital stock.

Miss., Pleasant Grove.—J. E. Lush contemplates erecting mill.

Miss., Sibleyton.—L. J. Burton will install corn mill.

Mo., Bernie.—Bernie Mill & Gin Co., capital stock \$2500, incptd. by H. F. Sadler, J. T. Jones and L. L. Higginbotham.

Mo., St. Joseph.—Aunt Jemima Mills Co., Robt. R. Clark, Pres., is reincorporation of 2 other companies; plants are in existence; contemplates no extensive building at present. (Lately noted incptd., \$500,000 capital stock, etc.)

Tex., Freepoint.—D. J. Woodward, San Antonio, Tex., and W. T. Eldridge, Sugarland,

PROPOSAL ADVERTISEMENTS IN THIS ISSUE

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acres; construct 4-ml. canal about 6 or 8 ft. wide, average depth 2 to 4 ft.; G. H. Harvey, Holly Hill, S. C., member Board of Viewers. Address Dr. S. P. Wells, Holly Hill.

Tex., Rosenberg.—City will expend \$12,000 to construct drainage system; no open canals; underground vitrified pipe from 24 in. to 10 in., curb, basins and manholes; construction by force account; will drain 320 acres; Jno. W. Maxey, Engr., Houston, Tex. (Mr. Maxey lately noted having contract.)

ELECTRIC PLANTS

Ala., Hartselle.—City granted 30-year franchise J. R. White for electric-light plant.

Ala., Ozark.—City voted \$25,000 bonds for electric-light and water-works improvements; lately noted to remodel old plant at present site, install additional equipment, etc.; B. C. Dowling, Supt.

Ark., Snyder.—Renner Mill Co. will install electric-light plant; purchased dynamo.

Ark., Danville.—W. W. Winters leased Danville electric-light plant and contemplates installing new plant in nearby town and purchasing turbine outfit complete.

Ark., Jonesboro.—Water and Light Commrs. contemplate erecting addition to power-house and install switchboard; ordered 500 K. V. A. generator. J. F. Christy is Mgr.

Fla., Micanopy.—Town will erect-light plant; develop 80 H. P.; lately noted as voting \$10,000 bonds; E. A. Hickson, Mayor. (See Machinery Wanted.)

Fla., Daytona.—J. W. Wilbur of Brookline, Mass., is reported interested in establishment of electric-light plant at Wilbur-by-the-Sea.

Fla., Jacksonville.—City let contract F. W. Long of Jacksonville at about \$35,000 to remodel old water-works as electrical substation and pumping-house. (See Water-Works.)

\$20,000, organized by G. A. McHenry of McHenry, Miss., and Geo. R. Burton of Talladega, Ala.; will erect plant to furnish electricity for lighting, fans and ice machinery. (See Hotels.)

Miss., Waynesboro.—Waynesboro Electrical Co. (O. R. Green in charge) will erect plant to develop 150 H. P.; cost \$2000; Mr. Green is installing and supervising construction of plant; machinery purchased. (Lately noted incptd., \$30,000 capital, by O. R. Green and others.)

N. C., Bethel.—City let contract for machinery and equipment for lately-noted electric-light plant; cost \$5000; will erect simple structure. Address The Mayor.

N. C., Warsaw.—City let contract J. B. McCrary Co., Atlanta, Ga., to survey city, furnish map and blueprints and prepare estimates of cost electric-light plant, water-works and sewer system; estimated cost \$35,000 to \$50,000. (City lately noted granting franchise to J. W. Petty of East Carolina Light & Power Co.)

S. C., Columbia.—Columbia Ry., Gas & Electric Co., E. W. Robertson, Pres., will expend \$4000 to erect addition to plant, for additional arc lights; rectifiers for lights ordered; W. M. Shannon, Ch. Engr. (Lately noted.)

Tex., Como.—Como Light & Gin Co., capital stock \$8000, incptd. by W. D. Moore, E. R. Crone and B. E. Morris.

Tex., Dallas.—Northern Texas Utilities Co., 331 Commonwealth Bldg., organized; Hiram Grosman, Pres.; W. C. Woodlief, Box 1615, Secy.-Treas. and Engr.; plans being prepared for new construction. (Lately noted incptd., capital stock \$500,000.)

Tex., Franklin.—City voted \$17,500 bonds to construct electric-light plant and water-works. Address The Mayor.

Va., Alexandria.—Alexandria County Electric Lighting Co., 405 Hibbs Bldg., Washing-

Tex., are reported as contemplating erection of \$300,000 stock food mill.

Tex., Orange.—Orange Rice Milling Co. let contract Southern Construction & Mill Supply Co., 8 Houston National Exchange Bank Bldg., Houston, Tex., to erect 50-ton feed plant; operate in connection with rice mill.

Tex., Schulenburg.—Schulenburg Oil Mill, G. A. Baumgarten, Propr., is making improvements, including warehouse for cake and flour; contemplates later installation of bolters, elevators, conveyors, etc. (See Cottonseed-oil Mills.)

Va., Fox.—Eck L. Hasg will erect 24-bbl. flour mill.

Va., Gale.—C. E. Bryant of Bridel Creek, Va., will erect 100-bbl. flour mill.

FOUNDRY AND MACHINE PLANTS

Fla., Kissimmee.—Machine Shop.—Mulberry Foundry & Machine Co. of Mulberry, Fla., is reported to have purchased site on which to build plant.

Ky., Covington.—Iron Works.—Stewart Iron Works, capitalization \$1,000,000, inceptd. by R. S., R. C. and Chas. T. Stewart.

Ky., Pikeville.—Machinery.—Call Machine & Supply Co., Box 337, organized; Jno. W. Call, Pres.; Jas. R. Call, V.-P.; Wm. P. Call, Secy.; operate plant to mfr. mine cars, mine screens, sheet-metal forms, smokestacks, tanks and machine parts; has buildings; opens machinery bids June 10; lately noted inceptd., \$10,000 capital. (See Machinery Wanted.)

N. C., Greensboro.—Laundry Machinery.—Hixie Laundry Machinery Co., capital stock \$50,000, inceptd. by Jno. M. Dick, L. J. Brandt and David Stern.

S. C., Greenville.—Foundry.—Greenville Iron Works, capital stock \$10,000, inceptd. with J. W. Conway, Pres., Atlanta, Ga., and J. M. Broom, Mgr., Greenville; W. L. Wilson, Secy.-Treas.; purchased foundry of K. S. Conrad on Rhett St.; will improve buildings and machinery.

Va., Blacksburg.—Machine Shop.—Virginia Polytechnic Institute, J. D. Eggleston, Pres., has plans and specifications ready for bidders to erect McBryde building of Mechanic Arts; separate bids received on heating, plumbing and electrical work; 210x231 ft.; 1 story over major portion, 2 stories high over remainder; outside walls stone; concrete floors and roof; Carneal & Johnston, Archts., 707 Chamber of Commerce Bldg., Richmond, where plans and specifications may be seen. (Previously noted.)

Va., Roanoke.—Safety Rail Joints.—Ballou Safety Rail Joint Co., organized; C. E. Michael, Pres.; H. B. Rockhill, V.-P.; Ashby Williams, Secy.-Treas.; plans to erect factory and equip with automatic machines to mfr. safety rail joints. (Lately noted inceptd., \$250,000 capital.)

Va., Staunton.—Cleaner and Polisher.—Roby Cleaning & Polishing Machine Corp., capital \$50,000, inceptd. to mfr. cleaning and polishing machine; J. A. Bell, Pres.; I. K. Roby, V.-P. and Gen. Mgr.; W. A. Bell, Secy.-Treas.; purchased equipped machine shop; will install additional equipment for machine shop and repair work; lately noted under Miscellaneous Enterprises. (See Machinery Wanted.)

GAS AND OIL ENTERPRISES

Fla., St. Petersburg.—Gas Plant.—City invites bids until May 4 to construct gas plant; J. B. McCrary Co., Atlanta, Ga., is preparing plans and specifications; city votes May 12 on \$148,000 bonds; C. D. Hammond, Commr. of Works. (Lately noted.)

La., Winnfield.—Tampico Oil Co., \$300,000 capital, chartered; C. H. Peal, Pres.; B. W. Bailey, V.-P.; O. M. Grisham, Secy.-Treas.

N. C., Raleigh.—Gas Plant.—Carolina Power & Light Co. has not let building and equipment contracts; retort house and machinery building to be 150x50 ft., 1 story, brick, with concrete floor; meter-house and storehouse, 2-story, 95x50 ft., brick; coal storage, 100x25 ft., concrete floor; coke storage, 90x60 ft., concrete floor; oxide storage, 45x15 ft., concrete floor; office building, 1 story, 36x16 ft., brick; present daily capacity, 250,000 cu. ft. (S. P. Cobb, New York, lately noted in charge construction.)

Okla., Allen.—Allen City Oil Co., capital \$25,000, inceptd. by W. W. Barnett of Allen, R. C. Byrd of Tulsa and C. W. Morehead of Washington.

Okla., Allen.—Allen City Oil Co., capital stock \$25,000, inceptd. by C. W. Morehead, Washington; R. C. Byrd, Tulsa, and W. W. Barnett of Allen.

Okla., Ardmore.—Worthmore Oil & Gas Co., capital stock \$50,000, inceptd. by John Scharbauer, Fort Worth, Tex.; C. W. Harkrider and Jeff Craddock of Ardmore.

Okla., Ardmore.—Worthmore Oil & Gas Co., capital \$50,000, inceptd. by John Scharbauer and C. W. Harkrider of Fort Worth, Tex., and Jeff Craddock of Ardmore.

Okla., Ardmore.—Ardworth Oil Co., capital \$250,000, inceptd. by B. A. Simpson and P. C. Dings of Ardmore, and S. T. Bledsoe of Oklahoma City.

Okla., Blackwell.—Northern Oil & Gas Co., capital stock \$50,000, inceptd. by M. L. Harris, Ray Ostot and L. C. Moore.

Okla., Claremore.—Sunshine Oil Co., capital \$10,000, inceptd. by R. L. Steiner, H. B. Gooch and C. Krause.

Okla., Guthrie.—Alice-Kathryn Oil Co., capital \$20,000, inceptd. by C. G. Horner and N. Cassidy of Guthrie and W. T. Hales of Oklahoma City.

Okla., Guthrie.—Alice-Kathryn Oil Co., capital stock \$20,000, inceptd. by M. Cassidy and C. C. Horner of Guthrie and W. T. Hales of Oklahoma City.

Okla., Hugo.—Hugo Oil Co., capital \$12,000, inceptd. by H. R. Milburn, J. F. Laracey and W. E. Stephenson.

Okla., McAlester.—Opal Oil & Gas Co., capital stock \$20,000, inceptd. by R. E. Seamans, H. S. Cohn and Herman Levin.

Okla., McAlester.—Alta-Herna Oil & Gas Co., capital \$5000, inceptd. by Jas. B. Hammond and E. M. Myers of McAlester and Jas. Brazell of Oklahoma City.

Okla., McAlester.—McAlester-Wagoner Oil & Gas Co., capital stock \$5000, inceptd. by R. L. Scheig, F. J. McFarland and B. E. Tabler.

Okla., McAlester.—Opal Oil & Gas Co., capital \$20,000, inceptd. by R. E. Seamans, H. S. Cohn and Herman Levin.

Okla., Muskogee.—Ester Oil Co., capital \$25,000, inceptd. by John H. Mosier, Alex. Moses and C. H. Rosenstein.

Okla., Muskogee.—Ding-Dong Petroleum Co., capital \$3000, inceptd. by E. G. Labree and W. L. Lindhard of Muskogee and J. C. Marton of Pryor, Okla.

Okla., Muskogee.—Powell-Barnes Drilling Co., capital \$10,000, inceptd. by O. A. Powell, P. L. Barnes and T. L. Powell.

Okla., Muskogee.—Ester Oil Co., capital stock \$25,000, inceptd. by John H. Mosier, Alex. Moses and C. H. Rosenstein.

Okla., Muskogee.—System Oil, Gas & Mfg. Co., capital stock \$75,000, inceptd. by V. V. Morgan, B. E. Spivy, N. C. Stephens and E. H. Bispham.

Okla., Nowata.—Yalobusha Oil & Gas Co., capital \$25,000, inceptd. by Roy Scott of Nowata, W. T. Trusty and H. T. Hunter of Water Valley, Miss.

Okla., Oklahoma City.—Badger Petroleum Co., 735 American Bank Bldg. (lately noted inceptd., capital \$20,000) organized; R. L. Corley, Pres.; J. L. Bostwick, V.-P.; F. B. Corley, Secy.; F. R. Ford, Treas.; acquired 10,000 acres leases in Montague and Cook counties; will drill; contemplates three test wells of 2000 to 2500 ft. depth; company purchases outfit; drilling by contract; considering future construction of pipe line and refinery.

Okla., Oklahoma City.—Big Star Oil Co., capital \$25,000, inceptd. by C. M. Joiner, Oscar Stuart and L. Wilson.

Okla., Oklahoma City.—Oklahoma Sunshine Oil Co., capital \$10,000, inceptd. by Jesse Notson of Oklahoma City, C. E. Richardson of Clinton, Okla., and W. T. Utterback of Binger, Okla.

Okla., Okmulgee.—Progressive Land & Oil Co., capital \$125,000, inceptd. by D. G. Franklin, Guthrie; S. A. Stripling, Topeka, Kans., and W. F. Smith, Shawnee, Okla.

Okla., Okmulgee.—Brazoria Reserve Oil Co., capital \$10,000, inceptd. by E. R. Black, C. L. Flesham and C. W. Holbrook.

Okla., Okmulgee.—Nora Oil Co., capital \$16,000, inceptd. by Geo. B. McCamey of Okmulgee, H. F. Campbell and Frank P. Fox of Indianapolis.

Okla., Sapulpa.—Kelleyville Oil & Gas Co., capital stock \$10,000, inceptd. by D. J. Childs, E. P. Burnett and F. R. Ross.

Okla., Sapulpa.—Kelleyville Oil & Gas Co., capital \$10,000, inceptd. by B. V. Morgan, B. E. Spivy, N. C. Stephens and G. S. Bispham of Muskogee.

Okla., Shawnee.—Mexhoma Petroleum Co., Ltd., capital stock \$500,000, inceptd. by L. C. Warner, C. W. Warner and John E. Stuart.

Okla., Shawnee.—Annie Tuggle Oil & Gas Co., capital \$10,000, inceptd. by John W. Jones and J. M. Meek of Shawnee and M. K. Ownbey of Morris, Okla.

Okla., Skiatook.—Washington Oil Co. let contract to drill wells; 10, 8 and 6½ in. pipng; J. H. Craig, Engr.; lately noted inceptd., \$10,000 capital, by J. H. Craig and others. (See Machinery Wanted.)

Okla., Tahlequah.—Tah-Okla Oil & Gas Co., capital \$10,000, inceptd. by S. R. Walkingstick, J. W. Reid and W. C. Holt.

Okla., Tulsa.—Noce Oil Co., capital \$250,000, inceptd. by W. V. Thraves and J. T. Bailey of Tulsa, and L. L. Avery, Nowata, Okla.

Okla., Tulsa.—Oakdale Oil & Gas Co., capital \$50,000, inceptd. by J. P. O'Meara and Mary Duldow of Tulsa, and David A. Campbell, Chicago, Ill.

Okla., Tulsa.—Coal Creek Oil & Gas Mining Co., capital stock \$10,000, inceptd. by J. W. Whitney, J. N. Sykes and E. M. Whitney.

Okla., Tulsa.—Longar Oil & Gas Co., capital stock \$10,000, inceptd. by Thomas Longear of St. Louis, Mo.; John S. Garvie, and W. V. Biddison of Tulsa.

Okla., Tulsa.—Coal Creek Oil & Coal Mining Co., capital \$10,000, inceptd. by J. W. Whitney and others.

Okla., Tulsa.—Longer Oil & Gas Co., capital \$10,000, inceptd. by John S. Garvie and W. V. Biddison of Tulsa and Thos. Loneragan of St. Louis.

Okla., Tulsa.—Oklahoma Oil Co., capital \$100,000, inceptd. by C. R. Stanton of Tulsa, G. K. Towels of Oklahoma City and J. L. Brown of Houston, Tex.

Okla., Wagoner.—Virginia Oil Leasing Co., capital \$6000, inceptd. by J. A. Seagrave of Inola, Okla.; Jas. J. Farrell and J. O. Taylor of Joplin, Mo.

Tex., Freeport.—Freeport & Tampico Fuel Oil Corp., authorized capital \$10,300,000, chartered; Thos. B. Gay, Pres.; Andrew B. Christian, V.-P.; H. H. Chalkley, Secy.; Ernest B. Flippen, Treas.; all of Richmond, Va.

Tex., Fort Worth.—Gas Works.—Lone Star Gas Co. will increase capital stock by \$1,000,000; plans to construct compressor in Petro- la gas field and generally extend activities.

Tex., Petrolia.—Guy Drilling Co., capital \$15,000, inceptd.; S. A. Guy, Pres.; Shell Goodman, V.-P.; F. J. Looney, Secy.-Treas.

Tex., Petrolia.—Caddo Producing Co., capital \$100,000, inceptd.; W. F. Woods, Pres.; L. M. Moffitt, V.-P.; W. S. Johnson, Secy.-Treas.

Tex., Iowa Park.—W. W. Oil Co., capital stock \$50,000, inceptd. by J. A. Watkins, H. E. Ware, B. F. Taylor and L. A. House.

W. Va., Clarksburg.—Temple Oil & Gas Co., capital stock \$25,000, inceptd. by Jacob Bloch, Jas. Starford, Jr., C. M. Goodman and others.

W. Va., Wheeling.—Otter Creek Oil & Gas Co., capital stock \$5000, inceptd. by D. B. Best, E. A. Bonar and C. F. Ross of Wheeling, C. E. Lytton and Wm. Balon of Bridgeport, O.

ICE AND COLD-STORAGE PLANTS

Ga., Donaldsonville.—Town contemplates establishing 8-ton ice plant; W. H. Vanlandingham, Mayor.

Ky., Burgin.—W. J. DeBaun, Perryville, Ky., will organize company to install lately noted ice and electric plant.

Ky., Hodgenville.—E. L. Herren, Liberty, Ky., will install ice plant; building recently purchased.

Ky., Shepherdsville.—Shepherdsville Electric Light, Water & Ice Co., S. W. Bates, Pres., let contract to install machinery; erect buildings; size and cost not determined. (Lately noted organized, \$10,000 capital, and to purchase 5-ton ice machine and cold-storage equipment.)

Miss., Ramsay Springs (not a P. O.).—Ramsay Mineral Springs Co. (G. A. McHenry of McHenry, Miss., and others) will install ice machinery. (See Hotels.)

Mo., Glasgow.—Glasgow Pure Ice & Supply Co., capital \$11,000, inceptd. by Jas. B. Simcox, Clarence W. Southworth and Harry C. Grove.

Mo., Glasgow.—Glasgow Pure Ice & Supply Co., capital \$11,000, inceptd.; Jas. B. Simcox, Pres.-Mgr.; C. H. Barnes, V.-P.; L. F. Becker, Treas.; erect 10-ton ice plant; 35x75x18 ft.; fireproof; brick; cost \$11,000. (Jas. Simcox lately noted to install plant and as letting contract for machinery.)

Mo., St. Louis.—Hannibal Ice & Fuel Co., capital stock \$60,000, inceptd. by John M. Herman and John J. Hannibal and others.

N. C., Statesville.—Imperial Cotton Oil Co. is installing additional coils and fore cooler; increase capacity about 15 per cent.

N. C., Morehead City.—Morehead City Sea Food Co. asks bids on machinery for 15-ton ice plant. (See Machinery Wanted.)

Tenn., Cleveland.—Bradley Packing & Cold Storage Co., capital \$20,000, organized; Geo. T. Hall, Pres.; L. D. Campbell, Secy.;

W. F. McIntire, Treas.; purchased Cleveland Ice & Cold Storage Corp. plant, and now making improvements.

Tenn., Columbia.—Columbia Produce Co. will erect cold-storage plant; 20x30 ft. inside measurement; building proposals open June 1; 2 rooms insulated with 4-in. thickness of Nonpareil cork laid in hot asphalt; contract let to Armstrong Cork & Insulating Co., Pitts- burgh, Pa., for cork insulation; cost \$1000; doors will also be insulated, contract let to Stephenson Mfg. Co., Chester, Pa.; character and cost of machinery not determined; capacity, 3000 cases or 100,000 doz. eggs, or 2 cars poultry. (Lately noted.)

Tenn., Memphis.—J. R. Collins purchased for \$18,000 Memphis Brewing & Malting Co.'s plant at Quimby and Robeson Sts.; will probably convert into cold-storage plant.

Tex., Lockhart.—Boyd Smith, Sam Marcos, Tex., and associates will erect ice factory and water-works.

Tex., San Angelo.—San Antonio Ice & Power Co., San Antonio, Tex., is reported to expend \$12,000 to remodel plant and install machinery.

Va., Farmville.—Farmville Ice Plant, W. C. Newman, Prop., is drilling deep well; will equip plant with automatic oiling system; supplies purchased.

Va., Grundy.—Grundy Light & Power Co., S. R. Hurley, Mgr., will install ice and electric plant; Mr. Hurley lately noted to in- stall refrigerating plant. (See Electric Plants.)

Va., Portsmouth.—Portsmouth Coal & Ice Co. is reported as to undertake extensive im- provements.

LAND DEVELOPMENTS

Fla., Bartow.—Valley Farms Co., Wm. A. Burgess, Pres. (lately noted inceptd., capital stock \$10,000), organized to develop 700 to 1000 acres in Peace Creek Drainage Dist., Polk county; land to be developed as part of the district; no independent work until after drainage plans are effected. (Peace Creek Drainage Dist. reclamation plans previously noted under Drainage Systems.)

Fla., St. Petersburg.—Maximo Land Co., capital stock \$10,000, inceptd.; Chas. R. Hall, Pres.; Avalon, N. J.; H. D. Werkheiser, V.-P., Philadelphia, Pa.; Edward T. Lamb, Secy.-Treas., St. Petersburg.

Fla., St. Petersburg.—Point Pinellas De- velopment Co., capital stock \$10,000, inceptd.; Chas. R. Hall, Pres.; Avalon, N. J.; H. D. Werkheiser, V.-P., Philadelphia, Pa.; Ed- ward T. Lamb, Secy.-Treas., St. Petersburg.

Ky., Buechel.—Cherokee Nursery Co., capital \$50,000, inceptd. by Edward Wilder, Chas. E. Gould and Chas. P. O'Brien.

Ky., Lexington.—City Development Co., capital \$10,000, inceptd. by L. G. Cox, C. N. Manning, Jos. W. Porter and others.

La., New Orleans.—London Development Co. purchased 108 acres at Gentilly and Lon- don Aves. for \$75,000 and will develop as residential suburb. (Lately noted inceptd. with \$500,000 capital stock by R. E. E. de Mont- luzin and others.)

La., New Orleans.—Lake Misere Land Co. of Louisiana, Frank Wm. Hart, Secy.-Treas., purchased 21,000 acres in Cameron parish; no development contemplated at present. (Lately noted inceptd., \$23,000 capital.)

Mo., St. Louis.—Claytonia Land & Invest- ment Co., capital stock \$2000, inceptd. by Henry Ittleson, Chas. M. Rice and Wm. K. Spinney.

N. C., Gastonia.—Gastonia Insurance & Realty Co. purchased 10 acres land for \$10,000 and will develop as residential section; construct concrete sidewalks around and through property, lay sewers, provide electric lights, etc.

N. C., Wilmington.—Brunswick Land & Lumber Co. (Frank C. Page and Ralph W. Page of Aberdeen, N. C., and others) purchased Allison Grant, comprising about 42,000 acres in Smithville and Town Creek townships; will develop for agricultural purposes; Mr. Page will establish main offices at Wilmington and Southport, N. C.

Okla., McAlester.—City votes \$30,000 park bonds. J. M. Gannaway, City Clerk. (Lately noted.)

S. C., Charleston.—The Lillian Corp., capital \$10,000, inceptd.; Hyman Fechter, Pres.; Louis Shmel, Secy.-Treas.

Va., Newport News.—Little Farms Co., capital stock \$15,000, inceptd.; L. P. Stearnes, Pres.; J. E. Warren, Secy.

Va., Roanoke.—Hamilton Terrace Co., B. L. Partlow, Pres., Box 507, will develop 16 acres adjoining city as subdivision; im- provements to include new streets, cement walks, sewers, etc.; cost \$10,000; erect 30 to 50 dwellings costing \$40,000; construction by company's force. (Lately noted inceptd., \$20,000 capital.)

Va., Winchester.—Fairfax Orchard Co., capital stock \$25,000, inceptd.; C. H. Schutte, Pres., New York; H. A. Schmidt, Secy., Winchester.

LUMBER MANUFACTURING

Ala., Montgomery.—Alabama-Georgia Timber & Lumber Corp., capital \$800, chartered; A. G. Forbes, Pres.; Grover Keyton, Secy.; Louis B. Fraley, Treas.

Ark., Boynton.—Boynton Land & Lumber Co. (Syndicate Trust Bldg.) will erect mill.

Ark., Calico Rock.—J. F. Light purchased ash and hickory timber lands; will install sawmill; cut furniture and wagon timber.

Ark., Childester.—Hindman Bros. Mill Co., T. P. Best, Pres., will operate lumber plant; daily capacity, 25,000 ft. pine and hardwood timber; erect buildings; construction by owner; machinery purchased. (Lately noted inceptd., \$15,000 capital.)

Ark., Ladelle (not a postoffice).—R. S. Tippey of Plainview, Ark., purchased timber on 230 acres near Ladelle; will erect mill.

Fla., Fountain.—Sherman-Spann Lumber Co., capital stock \$50,000, inceptd. by S. C. P. N. and M. S. Spann of Dothan, Ala.; W. C. Sherman of Columbiana, Ala., and H. F. Spann of Bamberg, S. C.; has \$100,000 plant, including shingle mill with daily capacity 75,000 shingles, sawmill, planing mill, dry-kiln, etc.

Ga., Macon.—J. S. Morton Lumber & Timber Co., capital stock \$200,000, inceptd. by J. S. Morton of Macon, Geo. Thomas, D. J. Vall, F. B. Morton, Jr., and J. E. Harroh of Ohio; is reported to build hardwood and pine plant.

Ky., Perry County.—Stephenson Hardwood Lumber Co., capital stock \$25,000, inceptd. by E. B. Stephenson, A. B. Koontz, W. O. Abney, J. D. Vickers and F. Stephenson, all of Charleston, W. Va.

Ky., Whitesburg.—T. C. Seaman Stave Co., Winchester, Ky., is reported to have purchased for development boundary Big Leatherwood Creek timber. (See Woodworking Plants.)

La., Alexandria.—Cooper Lumber Co., Jas. Cooper, Pres., will erect 8-ft. band-saw mill with annual capacity 10,000,000 ft. of cypress and hardwood; Wm. A. Brewer is V.-P. and Henry Nienstedt, Secy.-Treas. (W. A. Brewer of Saginaw, Mich., and others lately reported to develop 10,000 acres hardwood timber in Rapides parish.)

La., Elton.—Elton Lumber Co. purchased 400 acres timber land 4 mi. southeast of Elton; will cut timber and haul to Elton mill.

La., Shreveport.—Shreveport Long Leaf Lumber Co., capital \$100,000, inceptd.; W. A. Robinson, Pres.; J. J. Lyons, V.-P.; Jas. S. Merriwether, Secy.-Treas.

Miss., Canton.—Elk Lumber Co., Hub, Miss., increased capital stock to \$50,000 and removed headquarters to Canton.

N. C., Old Fort.—Old Fort Mfg. Co., capital \$25,000, inceptd. by I. H. Greene, R. L. Murphy and others.

Tenn., Memphis.—Russe & Burgess will rebuild sawmill lately noted burned.

Va., Roanoke.—Blackwood Lumber Co., capital stock \$200,000, inceptd.; Jas. E. Walker, Pres.; E. R. Chapman, Secy.

W. Va., Sitlington.—Warn Lumber Corp., capital stock \$200,000, inceptd. by W. H. Warn, Jr., and R. B. Warn of Seebert, W. Va.; Wm. R. Thomas and Wm. Krelger of Johnstown, Pa., and P. S. Warn of Meyersdale, Pa.

METAL-WORKING PLANTS

Mo., St. Louis.—Specialties.—W. J. Frank Mfg. Co., capital stock \$15,000, inceptd. by W. J. Frank, P. F. Frank and C. Fowlkes, all of Webster Groves, Mo., and others.

Va., Norfolk.—Weather Strips.—Southern Metal Weather Strip Corp., capital \$15,000, inceptd.; A. D. Hodgskin, Pres.; L. T. Seawell, Secy.

Va., Norfolk.—Brass Foundry, etc.—Southern Metal and Foundry Corp., capitalized at \$100,000, inceptd.; purchased 3 acres and 4 buildings, each 100x40 ft. and 3 stories high; will remodel building and install machinery to smelt and refine brass foundry residue, mfr. journal and engine brasses, etc.; Mgr., Fred D. Miller of Westminster Metal & Foundry Co., Westminster, Md.

MINING

Ala., Birmingham.—Iron.—Gray Ore Iron Co. will hold meeting Apr. 28 to consider bond issue not exceeding \$75,000.

Ala., Mobile.—Marble.—Alabama White Marble Co., capital stock \$200,000, inceptd.; H. E. Baxter, Pres.; John R. Bishop, V.-P.;

H. H. McClelland, Treas.; all of Mobile, and Leroy Bishop of Talladega Springs, Ala.

Ga., Atlanta.—Limestone.—South Georgia Limestone Products Co., capital stock \$15,000, inceptd. by T. Poole Maynard of Chattanooga, Tenn., and E. Hillard Spalding and Chas. Montgomery, Jr., of Atlanta.

Ga., Sparta.—Granite.—Georgia Quincy Granite Co., main office in Macon, will enlarge and improve plant; install new machinery and increase daily capacity from 1400 to 2500 ft. curbing.

Ky., Edmondston.—Iron.—Premier Products Co., capitalized at \$300,000, organized by Arthur Cobb and others of Bowling Green, Ky.; will mine iron and coal.

Mo., Lawton.—Lead and Zinc.—H. L. & S. Mining Co. will install equipment for electric drive throughout plant.

Mo., St. Louis.—Otto Mining Co., capital stock \$10,000, inceptd. by Katherine, Freda and Minnie F. Otto.

Mo., St. Louis.—Lead and Zinc.—Waterman Mining & Milling Co., capital \$2000, inceptd. by Mark C. Steinberg, Jay Goldman and Milton A. Hellman.

N. C., Bryson City.—Clay and Mica.—Tuckasee Clay & Mica Co., capital \$15,000, inceptd. by C. J. Hand and J. M. Hand of Bryson City and C. H. Visscher of Holland, Mich.

N. C., Charlotte.—Sand and Gravel.—Catawba Sand & Gravel Co., capital stock \$20,000, inceptd. by C. W. Requarth, W. F. McCannless, E. K. Trickey and J. E. Carson.

N. C., Elizabethton.—Mica.—Walt Aldridge, Hughes, N. C., is reported as installing machinery to develop Lineback mica mines.

N. C., Elkville.—Mica.—J. A. Graham of Charlotte, Va., and others will develop mica deposits on Banda Mountain, on Elk Creek; Geo. Gibson in charge.

Okla., Sallisaw.—Sand.—Hines-Kobel Sand Co., capital \$2400, inceptd. by R. W. Hines, Luella Hines and R. Kobel.

Okla., Hattonville, P. O. at Miami.—Lead and Zinc.—Church Mabon Co. is reported as contemplating expenditure of \$75,000 to \$100,000 to further develop mining property in district; owns several leases, including 49-acre lease on which to build concentrating plant.

Okla., Hattonville, P. O. at Miami.—Lead and Zinc.—J. O. Goodwin of Baxter Springs, Kan., and others purchased Bluebird mine, about 1 mi. from Hattonville, including 30-acre lease and 200-ton mill; will probably further develop.

Va., Hiwassee.—Ochre.—Virginia Ochre & Color Mines, capital stock \$100,000, inceptd.; Herbert L. Baker, Pres., and Duncan A. MacPhie, Secy., both of Boston, Mass.

W. Va., Mason.—Salt.—Ohio River Salt Co. elected Chas. J. Koehler as Pres. and Gen. Mgr.; M. G. Tyler, Secy.-Treas.; lately acquired property formerly owned by Hope Salt & Coal Co. and purchased additional land for contemplated enlargements.

MISCELLANEOUS CONSTRUCTION

Fla., Palatka.—Docks.—City is considering purchase of 600-ft. frontage on St. John's River for erection of concrete docks, warehouses, railroad tracks, etc.; plans include expenditure of about \$100,000; bond issue considered. Address City Engr. (Previously noted.)

Ga., Savannah.—Docks.—Georgia-Carolina Ferry Co., Gordon L. Groover, Pres., let contract Gadsden Contracting Co. to improve docks.

La., New Orleans.—Docks, Wharves, etc.—Board Port Comms. engaged Ford, Bacon & Davis, 115 Broadway, New York, to design and supervise construction cotton warehouses and wharves, docks, etc., in connection with same. (See Warehouses under Buildings Proposed.)

S. C., Charleston.—Government will dredge in Waccamaw River, North and South Carolina; bids until May 13 at office of G. P. Howell, Maj., Engrs. (See Machinery Wanted.)

Tenn., Chattanooga.—Signal System.—Nashville, Chattanooga & St. Louis Ry., H. McDonald, Ch. Engr., Nashville, Tenn., is reported to install electric block signal system between Cravens Yards and foot of Lookout Mountain.

Tex., Clinton.—Slips.—Southern Pacific Co., W. G. Van Vleck, Mgr., Texas Lines, Houston, Tex., will construct slips for heavy vessels.

Tex., Kaufman.—Levee.—Kaufman County Improvement Dist. No. 1, E. K. Atwood, Chrmn., Ennis, Tex., asks bids until May 22 to construct lately-noted levees, about 418,000 yds., about 10 mi., on Trinity River, near

Ennis and Rosser; cost about \$60,000; O. W. Finley, Engr., Ennis, Tex. (See Machinery Wanted.)

Tex., Port Arthur.—Pleasure Pier.—Port Arthur Pleasure Pier Co. will let contract for pleasure pier to cost \$8785 and for pile driving at \$1094.

W. Va., Piedmont.—Concrete Wall.—City will build reinforced-concrete wall on Hampshire St.; about 370 ft. long; bids until Apr. 22 at office of Street Com. (See Machinery Wanted.)

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Laundry.—A. A. Gamblin & Co. will erect building on 4th Ave. between 23d and 24th Sts. for Imperial Laundry; 3 stories; brick; cost \$17,500; R. V. LaBarre, Contr.

Ala., Birmingham.—Publishing.—Birmingham News, Victor H. Hanson, publisher, will erect newspaper office and printing plant building at 23d St. and Fourth Ave.; about 100x100 ft.; fireproof construction; plans being prepared.

D. C., Washington.—Laundry, etc.—Government will install laundry and dry-cleaning machinery; bids until Apr. 20 at office W. T. Hughes, Col. U. S. A., Treas. (See Machinery Wanted.)

Fla., Eustis.—Publishing.—Lake County Publishing Co. (publisher Eustis Lake Region) will erect 65x80-ft. building of mill construction; install machinery (purchased) costing \$15,000; W. M. Igoli, Pres.; W. S. McClelland, V.-P.; H. C. Hannah, Secy.; D. J. Caldwell, Treas.; C. E. Woods, Mgr.

Ga., Brunswick.—Creosoting Plant.—Brunswick Creosoting Co., capital stock \$150,000, organized; Lee Cook, Pres.; E. C. Eberts, V.-P.; Robt. C. Baldwin, Secy.-Treas.; J. B. Wilson, Gen. Mgr.; all of Louisville, Ky.; general offices at 916 S. 8th St., Louisville; will build \$100,000 creosoting plant with annual capacity 1,000,000 cross-ties or its equivalent, 50,000,000 board measure lumber. (Lately noted inceptd., etc.)

Ga., Columbus.—Grain Elevator.—City Mills Co. will enlarge grain elevator; reinforced concrete; cost \$12,000.

Ga., Lafayette.—Hardware.—Farmers' Hardware & Supply Co., capitalized at \$10,000, organized by J. D. McConnell, W. E. Withers, J. G. Young and others.

Ky., Clinton.—Grain Elevator.—Star Milling Co., J. U. Kevill, owner, Mayfield, Ky., will erect concrete grain elevator; 75,000 bus. capacity. (See Flour, Feed and Meal Mills.)

Ky., Covington.—Laundry.—Sanitary Laundry Co., capital \$10,000, inceptd. by R. Emmett Woods, A. Scott and J. Gertrude Scott.

Ky., Louisville.—Blair Young Publishing Co. increased capital from \$5000 to \$10,000.

Ky., Louisville.—Publishing.—Blair-Young Publishing Co. increased capital stock to \$10,000.

La., New Orleans.—Publishing.—Times-Picayune Publishing Co., capital stock \$700,000, inceptd. to publish Times-Picayune, daily newspaper, consolidation of Times-Democrat and Picayune; Ashton Phelps, Pres.; Albert Baldwin, Jr., V.-P.; Daniel D. Moore, Secy.-Mgr.

Miss., Jackson.—Gasoline Motor Line.—Jackson-Clinton Motor Transit Co., capital \$10,000, inceptd. by Dr. Julian Crister and E. J. Elzey of Jackson, and J. W. Province, Clinton, Miss.; will operate gasoline motor line between Jackson and Clinton.

Mo., St. Louis.—Engineering.—Estimating Engineering Co., capital \$4000, inceptd. by J. T. Dodds, Howard Bryan and Lee A. Hall.

Mo., St. Louis.—Publishing.—Modern Hospital Publishing Co., capital stock \$10,000, inceptd. by Leonora M. Ball and Irvin H. Barth of St. Louis, John A. Hornsby and Edith M. Hornsby of Chicago, and others.

N. C., Charlotte.—Incinerator.—City will resume arrangements to construct incinerator; Hering & Gregory, Engrs., 170 Broadway, New York, have not yet prepared specifications; \$24,000 appropriated. (Lately noted.)

N. C., Charlotte.—Chemicals, etc.—Southern Dyestuff & Chemical Co. (lately noted incorporated by Lynn W. Buck and others) organized to act as selling agent for National Gum & Mica Co., importers, manufacturers and exporters, 59th St. and 11th Ave., New York; National Glue & Gelatine Works, National Color & Chemical Works, National Clay Compound and other companies.

N. C., Hendersonville.—Laundry.—Hendersonville Laundry, Ice & Fuel Co., authorized capital \$50,000, inceptd. with C. R. Whitaker, Pres.-Treas. and C. N. Wrenshall Secy.; will continue plant operated by Mr. Whitaker and install additional machinery.

N. C., Townesville.—Livestock.—Townesville

Livestock Co., capital stock \$10,000, inceptd. by J. J. White, Geo. Tarry, W. B. Tarry and A. R. Tarry.

Okla., Tulsa.—Construction.—Goodall Construction Co., capital \$300,000, inceptd. by Thos. E. Goodall, Fred D. Oiler and D. Goodall.

S. C., Charleston.—Fishery.—Carolina Fish Co., capital \$3000, inceptd. with Thos. W. Carroll as Pres.

S. C., Greenwood.—Laundry.—Antiseptic Steam Laundry, T. K. Hudgens, Mgr., will improve plant at cost of \$3000.

S. C., Rock Hill.—Printing.—Record Printing Co., capital \$10,000, inceptd. by O. K. Williams and C. M. Schwarz.

Tenn., Chattanooga.—Laundry.—David M. Bright of New York and others are reported to establish electric sanitary laundry.

Tenn., Harriman.—Laundry and Dry Cleaning.—Harriman Laundry & Dry Cleaning Co., capital \$5000, inceptd.; John R. Davis, Pres.; F. T. Sanders, V.-P., Secy. and Treas.; Jno. R. Davis, Mgr.; succeeds Harriman Steam Laundry.

Tenn., Nashville.—Laundry.—David M. Bright of New York and others are reported to establish electric sanitary laundry; cost of building and equipment \$150,000.

Tex., Dallas.—Contracting.—Warren Heaton Construction & Investment Co., capital \$10,000, inceptd. by Warren Heaton, Chas. O. Hodges and P. W. Sims.

Va., Charlottesville.—Contracting.—Carpenter Co., capital \$20,000, inceptd.; Chas. Cobb, Pres., Marshall, Tex.; Z. R. Lewis, Secy., Roanoke, Va.

MISCELLANEOUS FACTORIES

Ark., Fort Smith.—Canvas Goods, etc.—Tucker Duck & Rubber Co. manufactures tents and canvas goods; H. Templeton Tucker, Pres., Treas. and Mgr.; W. O. Lawhon, V.-P.; Allen Cox, Secy. (Lately noted inceptd., capital stock \$60,000.)

Ark., Harrisburg.—Rice.—Weiner Rice Mill will rebuild plant partially burned.

Fla., Branford.—Turpentine.—Oseola Turpentine Co. has plans and specifications to erect large structural-iron building; install machinery to mfr. turpentine.

Fla., Kissimmee.—Cigars.—W. A. Smith, J. D. Woodbeck and others organized company to establish cigar factory.

Fla., West Tampa, Station Tampa.—Cigars.—Cuesta, Rey & Co. let contract E. W. Parker at about \$18,000 to erect addition to plant; 90x45 ft.; brick; 3 stories and basement; 16,200 sq. ft. floor space; sprinkling system; Archt., John W. Bigger, West Tampa.

Fla., Ybor City, Station Tampa.—Cigars.—Arguelles & Lopez Bros. let contract Teasly & Keynton to erect addition to cigar factory at 21st St. and 15th Ave.; 13x32 ft.; ordinary construction; gravel roof; cost about \$5000; Archt., A. H. Johnson, Tampa. (Lately noted.)

Ga., Atlanta.—Dental Supplies.—Lide Dental Mfg. & Equipment Co., capital stock \$2500, inceptd. by D. R. Lide of Decatur, Ga., and B. C. Williamson of Atlanta.

Ga., Atlanta.—Films.—Al Barrett Film Mfg. Co., capital stock \$6000, inceptd. by Al Barrett, Martin F. Amorous and H. G. Morrow.

Ga., Savannah.—Rosin Products.—National Rosin Products Co. inceptd. by Geo. W. Campbell, J. M. Righton and Gordon Saussy.

Ga., Valdosta.—Ice Cream.—Everett M. Williams, formerly V.-P. Columbia Ice Cream Co., Mobile, Ala., will establish ice-cream factory.

Ky., Columbia.—Brooms.—E. W. Avey is interested in proposed broom factory and cotton gin.

Ky., Hazard.—Bakery.—Hazard Wholesale Baking & Supply Co. organized; J. G. Campbell, Pres.; Talbert Halliday, V.-P.; G. D. Halliday, Secy.-Treas.; let contract to R. R. Edwards to erect bakery; 24x64 ft.; 1 story; 12-ft. ceiling; ordinary frame construction; steel siding; purchased some machinery; bids opened May 30 for mixer, wrapper, scales, etc.; daily capacity 3 to 5 bbls. of pies and bread; lately noted inceptd., \$5000 capital. (See Machinery Wanted.)

Ky., Lexington.—Redrying.—Land Tobacco Redrying & Storage Co., W. F. Land, Pres., has plans by J. F. Manly for redrying plant; 100x170 ft.; concrete, brick and steel; cost \$25,000; Mr. Land will erect; American Tobacco Co., Lexington, to install redrying machine; daily capacity, 200,000 lbs. tobacco. (Lately noted closing contract with American Tobacco Co. to double capacity of plant, etc.)

Ky., Louisville.—Tobacco.—Ryan-Hampton Tobacco Co., capital \$100,000, inceptd. by W. E. Massey, J. W. Goodrum, Thos. Hampton and J. M. Clay.

Ky., Louisville—Gas Burners.—Gault Gas Burner Co., capital stock \$115,000, incptd. by Jas. B. White and Wm. A. Rosenfield of Louisville and Stafford E. J. McKenna of Fairfield, Ky.

La., Slidell—Wood Distillation.—Forest Products Co. will improve plant, increasing daily capacity to 30 cords; J. C. Mims, chemical engineer, in charge of construction.

Md., Baltimore—Paints.—Jas. B. Macneal & Co. will replace plant reported burned at Warner and Wooster Sts.; all arrangements made.

Maryland—Electric Vehicles.—Maryland Electric Vehicle & Mfg. Co., capital \$100,000, incptd. by Jas. M. Satterfield, Walter P. Carrow, M. M. Hiron, all of Dover, Del.

Mo., St. Louis—Chemicals.—John T. Milliken & Co. let contract for factory building at N. Market St. and Leffingwell Ave.; 4 stories; reinforced concrete; terra-cotta front; fireproof; cost \$75,000.

Mo., St. Louis—Fire Apparatus.—Robinson Fire Apparatus Mfg. Co., 20th and Ferry Sts., will erect addition to plant; 2 stories; 31x130 ft.; cost \$15,000.

Mo., St. Louis—Fire Appliances.—Missouri Fire Appliance Co., capital \$50,000, incptd. by E. R. Landon, Sr., Geo. H. Johnson and C. S. Russell.

Mo., St. Louis—Hammer Bros. White Lead Co. is reported to improve plant; cost \$50,000 to \$75,000.

Mo., St. Louis—Glue, etc.—Reardon Glue Co., 1537 N. Broadway, organized; James A. Reardon, Pres.; J. Vincent Reardon, V.-P.; Arthur T. Gaertner, Secy.-Treas.; machinery includes mixing and grinding machines to mfr. glue and cold-water paint, etc.; daily capacity 4000 lbs. glue and 12,000 lbs. cold-water paint. (Lately noted incptd., \$10,000 capital.)

Mo., St. Louis—Fire Appliances.—Missouri Fire Appliance Co., capital stock \$50,000, incptd. by E. R. Landon, Sr., Geo. H. Johnson and H. L. Halvorson, all of Chicago, and others.

Mo., St. Louis—Automobile Caps.—Aulogo Motor Cap Co., capital stock \$25,000, incptd. by Jas. A. Cohoun and J. F. Hilbert, both of St. Louis, and Thos. H. Thatcher of Ferguson, Mo.

Mo., St. Louis—Patented Lighter.—Hand-lite Mfg. Co., capital stock \$6000, incptd. by A. J. Lindsay, Robert H. Keiser, S. M. Riggs and others.

Mo., St. Louis—Ribbon and Carbon.—Radio Carbon & Ribbon Co., capital stock \$5000, incptd. by Geo. Jensen, F. E. Eggertman and Libbie Jensen.

Mo., St. Louis—Tobacco.—Liggett & Meyers Tobacco Co. will increase capital stock to \$1,250,000 by issue of \$7,375,100 preferred stock.

N. C., Charlotte—Dairy Products.—Purity Dairy Products Co. will install additional machinery costing \$20,000; equipment purchased.

N. C., Black Mountain—Bakery.—Black Mountain Bakery, capital \$10,000, incptd. by J. W. Jones, L. S. Sawyer, K. L. Jones and Geo. W. Lelpfert.

Okla., Chandler—Chemicals.—Curine Chemical Co., capital \$10,000, incptd. by J. M. Mayer and Anna Mayer of Chandler and A. W. Maxwell of Lawton, Okla.

Okla., Hobart—Cheese.—J. L. Kraft, Prest. J. L. Kraft & Bros. Co., Chicago, Ill., is reported as contemplating establishment of cheese factory.

Okla., Oklahoma City—Remedies.—Rose Remedy Co., capital \$10,000, incptd. by C. H. Rose, T. A. Jones and J. Henry Long.

Okla., Oklahoma City—Medicine.—Rose Remedy Co., capital stock \$10,000, incptd. by C. H. Rose, T. A. Jones and J. Henry Long of McAlester, Okla.

Okla., Thomas—Cheese.—J. L. Kraft, Prest. J. L. Kraft & Bros. Co., Chicago, Ill., is reported as contemplating establishment of cheese factory.

Okla., Tulsa—Hi-Grade Gasoline Co. incorporated by Bernard Revel, D. C. Rose and Ray S. Fellows.

Tenn., Memphis—Bakery.—Thompson Syndicate, 11 S. Main St., will install bakery in restaurant.

Tenn., Sequatchie—Brooms.—J. D. Wyrock, Knoxville, is reported as planning organization of company to establish factory with daily capacity 50 doz. brooms.

Tenn., Harriman—Overalls.—M. P. Thompson & Son leased two buildings at Clinton and Walden Sts.; will install 40 machines with electrical drive equipment.

Tex., Dallas—Overalls.—Hamilton Carhartt Mfg. Co., capital stock \$25,000, incptd. by Hamilton Carhartt, Hamilton Carhartt, Jr.,

and Wylie W. Carhartt, all of Detroit, Mich. Tex., Galveston—Coffee Roasting.—Walker-Smith Co., L. N. Tarrant, Mgr., Brownwood, Tex., will build coffee-roasting plant; erect building, 1 story, 42x90 ft.; brick; daily capacity, 10,000 lbs.; ordered machinery; cost \$25,000.

Tex., Galveston—Coffee Roasting.—Walker-Smith Grocery Co. will erect 1-story brick building for coffee-roasting plant; daily capacity 10,000 lbs.; cost \$3000; also erect iron garage to cost \$1000.

Tex., Goldthwaite—Creamery.—W. W. Saylor will establish creamery.

Tex., Palestine—Mattresses.—T. E. Ritchey of San Antonio is reported contemplating building factory with daily capacity 100 mattresses.

Tex., San Angelo—Candy.—Wm. Coleman is reported to establish candy factory; now erecting building.

Tex., San Augustine—Turpentine.—Texas Turpentine Co. secured leases on timber and will install turpentine producing plant.

Tex., San Antonio—Fuel.—Oakol Mfg. Co. organized by Rush D. McCullough, Henry G. Ward, L. H. McDaniels and A. Lacy of Mercedes to mfr. fuel from garbage and waste from nearby lignite coal mines.

Tex., Sherman—Music Rolls, etc.—E. E. Allen will establish plant to mfr. sheet and roll music; also contemplates manufacturing machines to print sheet music and mfr. music rolls for piano players and other musical instruments.

Va., Basic City—Electrical Products.—Price Electric & Mfg. Co., capital stock \$100,000, incptd.; Paul Steinman, Pres., Waynesboro, Va.; T. A. Samuels, Secy., Basic City.

Va., Buena Vista—Tannery.—Leas & McVitty Tannery Co. will rebuild chip-drying plant burned at loss of \$15,000.

Va., Norfolk—Creamery.—O'Dea Butter Co. incptd.; F. O'Dea, Pres.; N. O'Dea, Secy.

Va., Salem—Medicine.—Globe Chemical Corp., authorized capital \$100,000, incptd. to mfr. remedy for pellagra; F. V. N. Painter, Pres.; B. P. Shelor, V.-P.; C. E. Shelor, Secy.-Treas.

Va., Templeman Crossroads—Scalder.—Sanitary Scalder Co., capital stock \$10,000, incptd.; R. L. Parker, Pres., Templeman Crossroads; E. Madison Hall, Secy., 10th St. Wharf S. W., Washington, D. C.

W. Va., Bluefield—Beverages.—Gin-Gera Bottling Co., Norfolk, Va., will instal \$10,000 bottling plant.

W. Va., Charleston—Asphalt.—Wood Fiber Asphalt Co., capital stock \$250,000, incptd. by A. G. Wamock, S. B. Clinton, G. O. Clinton, S. Hess and W. G. MacCorkle.

W. Va., Parkersburg—Corrugated Paper.—Parkersburg Corrugated Paper Co. has plans by W. H. Adair for factory building; brick; cost \$10,000. (Lately noted incptd. with \$50,000 capital stock by S. W. Goff and others.)

W. Va., Pemberton—Ice-cream.—Lilly Ice & Bottling Works organized; Prince E. Lilly, Pres.-Treas., Glen Morgan, W. Va.; John R. Hornbrook, V.-P.; L. Lewis, Secy., McAlpine, W. Va.; operate ice-cream factory; has building; lately noted incptd., \$35,000 capital. (See Machinery Wanted.)

W. Va., Richwood—Extracts.—Cherry River Extract Co., capital stock \$250,000, incptd. by John Mulready and C. W. Seeley of Richwood, Geo. H. Kerr of Lynchburg, Va.; J. H. Agnew and Geo. H. Cowan of Chicago.

MOTORS AND GARAGES

Ga., Tifton—Garage.—Amos C. Tift has plans by Park A. Dallas Co., 913 Candler Bldg., Atlanta, Ga., for garage; 2 stories; terra-cotta trimmings; pressed brick; steel truss; plate glass; concrete floors; motor-driven elevator; tin and tile roof; cost \$10,000; day labor; S. N. Adams, Tifton, in charge.

Ky., Lexington—Automobiles.—Commercial Auto Co. increased capital from \$12,000 to \$25,000.

Ky., Horse Cave—Garage.—Peter Branstetter will erect garage; 50x80 ft. (See Machinery Wanted.)

Mo., Kansas City—Automobiles.—Hall Bros. & Reeves Motor Co., capital stock \$5000, incptd. by C. W. and C. H. Hall and C. H. Thompson.

Mo., St. Louis—Automobiles.—Jeffrey Motor Car Co., capital \$4000, incptd. by Albert Albrecht, Thos. V. Murphy and Geo. Elgel.

Tex., Hearne—W. A. Wilkerson let contract to erect garage; brick; 50x100 ft.; cost \$6000; Randle Miller leased structure for 3 years.

Tex., Dallas—Automobiles.—Dallas Motor Bus Co., capital \$25,000, incptd. by Ralph Robertson, D. E. Taylor, W. M. Smith and others.

Tex., Galveston—Garage.—Walker-Smith Grocery Co. will erect iron garage costing \$1000. (See Miscellaneous Factories.)

Tex., Denton—Garage.—L. Bailey will erect garage; fireproof; 60x120 ft.

Va., Norfolk—Automobiles.—Norfolk Auto Service Co., capital stock \$25,000, incptd.; R. S. Douglas, Pres.; D. Hardy, Secy.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Fla., Buena Vista—Florida East Coast Ry., J. H. Nelson, Gen. Supt., St. Augustine, has plans for shops and yards; total car capacity 1250; also erect roundhouse and other buildings; plans not yet prepared. (Previously reported purchased site.)

S. C., Florence—Atlantic Coast Line R.R., E. B. Pleasants, Ch. Engr., Wilmington, N. C., will erect roundhouse; brick; diam., 110 ft.; 40 stalls; install turntable operated by electricity; plans on file with R. E. Smith, Supt. motive power, Wilmington, N. C. (Lately noted appropriated \$110,000 to enlarge shops.)

ROAD AND STREET WORK

Ala., Alexander City—City let contract J. L. Mullarky, Birmingham, to lay about 8 mi. 4-ft. sidewalk; about 16,000 sq. yds. at \$1 per yd.; J. G. Robertson, City Engr.

Ala., Birmingham—City will pave with asphaltic concrete on Ave. H from 11th to 12th Sts., and 11th St. from Ave. H to Sylvan Ave.; estimated cost \$7500; also grade and macadamize 38th St. from Ave. B to Ave. F; about 3500 yds. excavation, 1400 cu. yds. macadam and 4000 yds. cement work; estimated cost \$7250; bids by Comms. until Apr. 28 on both contracts; Julian Kendrick, City Engr. (See Machinery Wanted.)

Ala., Clanton—W. S. Keller, State Highway Engr., Montgomery, Ala., invites bids to grade 13 mi. road through Chilton county between Montgomery and Birmingham; county to appropriate \$8000 and State \$3271; bids until May 9 at office of County Comms.

Ala., Columbiana—Shelby County let contract A. T. Newell & Bros., Birmingham, to construct proposed (about) 4 mi. macadam road; estimated cost \$200,000; Milner & Brown, Engrs., 101 Courthouse, Birmingham.

Ala., Florence—City will pave with water-bound macadam 2600 ft. roadway on Royal Ave. and Huntsville Rd.; work includes 8000 sq. yds. macadam pavement, 1000 ft. combination curb and gutter and 500 ft. drain tile, etc.; bids until May 4; plans and specifications at office of Lund & Hill, Consult. Engrs., Little Rock, Ark.; A. M. Lund, City Engr.; lately noted. (See Machinery Wanted.)

Ala., Guntersville—Marshall County Commissioners let following contracts to grade and drain about 20½ mi. road, pave 5 mi. with chert and gravel and 4 mi. with water-bound macadam; Goodrich & Crinkley, Anniston, at \$17,000; W. A. Hicks & Son, Millport, Ala., at \$12,000; R. G. Hill & Co., Birmingham, at \$15,000; T. D. Kemp, County Engr. (Lately noted.)

Ala., Hamilton—Marion County, Mack Pearce, Probate Judge, let contract Jordan & Phillips, Aberdeen, Miss., to construct 23 mi. pike road; 18 mi. northeast from Hamilton, 5 mi. west; cost about \$42,000. (Lately noted.)

Ala., New Decatur—City will pave 9th St. South and Riverview Ave. Address The Mayor.

Ala., Rockford—Coosa County Comms. let contract D. Levie, Goodwater, Ala., to construct 3 mi. State-aid road from Kellyton to Rockford. (Lately noted.)

Ark., Paragould—Comms. Paragould Paving Dist. let contract Williston Construction Co., Chicago, Ill., at about \$113,000 for 60,000 yds. paving; E. A. Kingsley, Engr., Little Rock, Ark. (Lately noted.)

Ark., Prescott—Nevada county contemplates voting on bonds for road construction. Address County Comms.

Fla., Jacksonville—Duval County Comms., J. H. Patterson, Chmn., will pave with concrete and (or) vitrified paving brick on John Anderson Highway, through Bayard to county line, about 21,916 ft., 15 ft. wide between curbing; bids on materials until May 6. (See Machinery Wanted.)

Fla., Ocala—City votes in June on \$400,000 for several mi. of paving, etc.; C. W. Hunter, Prest. of Council. (See City and County.)

Fla., Orlando—City sold \$100,000 street-improvement bonds heretofore authorized; completed 135,000 sq. yds. brick pavement and will contract for additional paving; ordered 5,000,000 bricks; bids for laying and grading

will be asked; will use plain curb and combination curb and gutter. Address City Engr.

Fla., Port Tampa—City will pave about 11,248 sq. yds. brick and concrete pavement and 12,200 lin. ft. concrete curb and gutter; bids until May 4; plans and specifications at office of City Engr.

Ga., Pelham—City voted \$4000 bonds for street improvements and paving. Address The Mayor. (Lately noted.)

Ky., Hickman—Fulton County Comms. let contract Sam Wilson to grade 77 mi. road.

Ky., LaGrange—Town Council let contract to John Butler to construct concrete street crossings; cost \$400; R. H. Snyder, Mayor. (Lately noted.)

Ky., Lexington—City will construct sidewalks according to ordinance No. 2996 on both sides of following streets: 3d and 5th Sts., W. Main St., Patterson St. and Virginia Ave.; also in accordance with ordinances Nos. 72 and 123, portions of W. Short, S. Spring St. and Patterson St.; bids until Apr. 23; C. H. Wilkinson, Commr. of Public Works.

Ky., Versailles—E. H. Taylor, Jr., Frankfort, Ky., will construct roads through 1300-acre estate; letting contracts.

La., Abbeville—Vermilion Parish, A. O. Landry, Secy. Police Jury, will begin proposed road construction about July 1. (Bond issue of \$72,500 and bids on road machinery lately noted.)

La., Baton Rouge—East Baton Rouge Parish Police Jury, F. A. Woods, Secy., voted \$185,000 bonds to construct 3 main roads from 5 to 8 mi. long and 4 cross-roads about 3 mi. long each; plans and specifications by W. E. Atkinson, State Highway Engr., New Orleans, La.

La., Benton—Bossier Parish Police Jury, J. C. Logan, Pres., has \$1,750,000 available to construct 45 mi. permanent hard roads; W. E. Atkinson, State Highway Engr., New Orleans Court Bldg., New Orleans, La. (Lately noted at La., New Orleans, to receive bids until Apr. 20.)

La., New Orleans—City let contract J. R. Stiehle, New Orleans, at \$26,000 to pave with cressote blocks road from Clouet to Alvar St.

La., New Orleans—City let contract Jones S. Irving at \$53,345 to construct shell roads at West End Lake Park. (Lately noted.)

La., New Orleans—City will pave Clouet St. from Royal to St. Claude Ave. with Rudolph Blome granitoid concrete-blocked pavement; bids until Apr. 28; A. G. Ricks, Commissioner. (See Machinery Wanted.)

Md., Baltimore—City let contract P. Flanagan & Sons, 120 E. Lexington St., to pave 29th St. from Greenmount to Guilford Aves. with sheet asphalt; width 40 ft. between curbs.

Md., Baltimore—City let contract Union Paving Co., Schenectady, N. Y., for sheet asphalt paving included in contract No. 150.

Md., Baltimore—Maryland State Roads Com., O. E. Weller, Chmn., 601 Garrett Bldg., will build 5 sections State highway, about 18.40 mi., in Baltimore city, and in Charles, Garrett and Montgomery counties; also filling in concrete bridge over Gwynn's Falls, Frederick Rd.; bids until May 5. (See Machinery Wanted.)

Md., Baltimore—State Roads Com., O. E. Weller, Chmn., let contract No. 14 J. 8. Bonf, 17 E. Camden St., Baltimore, at \$15,017 for 1.57 mi. concrete or macadam road in Caroline county; Pugh & Hubbard Co., Witherspoon Bldg., Philadelphia, Pa., at \$29,883 for 1.77 mi. concrete or macadam road in Cecil county; Bamberger-Chapman Co., East Orange, N. J., at \$26,237 for 2 mi. resurfacing, Contract No. 15, road in Frederick county, and McNeerney Construction Co., Canton, Pa., 6.72 mi. concrete, bituminous or macadam road in Wicomico county, between Pittsville and Worcester county line.

Md., Ellicott City—Howard County Commissioners, M. J. Sullivan, Clerk, will construct section of State-aid highway along road known as Lawyers' Hill, about 1.72 mi., 1 mi. of road to be built on relocation; bids until Apr. 28; plans and specifications at office State Roads Com., Garrett Bldg., Baltimore. (See Machinery Wanted.)

Miss., Booneville—Comms. Supvrs. Dist. No. 1 let contract Caruthers & Bolton, Booneville, at \$18,013 to improve about 3.5 mi. road with novaculite, gravel or crushed stone; Xavier A. Kramer, Engr., Magnolia, Miss. (Call for bids lately noted.)

Mo., Carthage—Jasper County Comms. plan road construction to cost \$50,000.

N. C., Danbury—Beaver Island township of Stokes county defeated bonds to construct roads. Address County Comms. (Lately noted.)

N. C., High Point.—City, Fred N. Tate, Mayor, will create paving-improvement districts; now arranging for the first to include about 40,000 to 50,000 sq. yds. asphalt paving.

N. C., Greensboro.—City contemplates voting on \$100,000 bonds to pave streets; will not vote on \$50,000 lately noted as proposed for streets and schools. Address The Mayor.

N. C., Lillington.—Black River township of Harnett county (including Angier) votes June 10 on \$25,000 bonds to construct roads. Address County Commrs.

N. C., Lillington.—Lillington township of Harnett county voted \$15,000 bonds to construct roads; W. P. Byrd, H. T. Spears and J. W. Halford, Road Commrs.

N. C., Raleigh.—City voted \$56,000 bonds to pave about 25 mi. of streets, including Hillsboro, Fayetteville, Martin and South Sts. and Newbern Ave.; property-owners to contribute \$86,000 additional, making \$142,000 available. Address The Mayor. (Lately noted.)

Okl., Boswell.—City let contract for about 20 blocks concrete sidewalks. Address The Mayor.

S. C., Charleston.—City asks bids until May 5 to pave about 65,000 sq. yds. on concrete base; probably 20,000 to 25,000 yds. creosote wood block, blance sheet asphalt, asphaltic or bituminous concrete or bitulithic; J. H. Dingle, City Engr. (See Machinery Wanted.)

Tenn., Lewisburgh.—City votes May 9 on \$20,000 street-improvement bonds. Address The Mayor.

Tenn., Nashville.—City Com. let contracts totaling \$457,134.21 to pave 42 streets: Southern Asphalt & Construction Co., Birmingham, Ala., for wood-block and vitrified paving; Adamant Stone & Roofing Co., Nashville, granite paving; Uncle Hiram Roofing Co., Nashville, bituminous macadam paving; Wm. W. Southgate, City Engr.; H. E. Howse, Mayor. (Call for bids lately noted.)

Tex., Batesville.—Zavalla county votes May 12 to \$10,000 bonds to improve roads. Address County Commrs.

Tex., Cameron.—Road Dist. No. 8 of Milam county (including Rockdale) will vote on \$100,000 bonds to construct roads. Address County Commrs.

Tex., Greenville.—Hunt County Precinct No. 4 defeated lately-noted bonds for road construction.

Tex., Hillsboro.—Road Commrs. of Dist. No. 1 of Hill county will build about 25 mi. bituminous-bound rock and gravel roads; bids until Apr. 29; J. D. Stephenson, County Judge. (See Machinery Wanted.)

Tex., Houston.—Harris County will grade 6½ mi. Alameda Rd. and place 8500 cu. yds. gravel thereon; also 10,400 cu. yds. shell; 5600 cu. yds. shell f. o. b. cars Cypress, and paving Cypress and Rose Hill Rd., and grading 3 mi. Cypress and Rose Hill Rd.; hauling, spreading and rolling materials, either shell or gravel; 1600 cu. yds. gravel f. o. b. Eureka for construction of 1 mi. White Oak Rd., hauling and placing thereon 1700 cu. yds. road gravel, paving road past Hildebrandt school, distance 1 mi., width 12 ft., and necessary grading; 8200 cu. yds. shell f. o. b. cars at Sellers, on International & Great Northern R. R., and for paving extension of East Montgomery Rd.; for hauling and placing 8200 cu. yds. shell on 4.2 mi. of extension, 12 ft. wide; bids until May 4; H. L. Washburn, County Auditor. (See Machinery Wanted.)

Tex., Houston.—City, E. B. Bonney, Secy., will grade and pave Austin St. from Franklin to International & Great Northern tracks; bids until Apr. 27; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., Kaufman.—Comms., Dist. No. 3, Kaufman county, voted \$300,000 bonds for road construction; Jas. A. Cooley, County Judge. (Lately noted.)

Tex., Kaufman.—Justice Precinct No. 8, Kaufman county, voted \$150,000 bonds for road construction; Jas. A. Cooley, County Judge. (Lately noted.)

Tex., McDade.—Bastrop county defeated \$20,000 bonds to construct roads. (Lately noted.)

Tex., Odessa.—Ector county contemplates voting on \$50,000 road construction bonds. Address County Commrs.

Tex., San Antonio.—City let contract Rushmore & Gowdy at \$1288.61 to construct sidewalks around cemeteries on East Commerce St. Hans Helland, City Engr.

Tex., San Antonio.—Rockhill Toll Road Co., J. P. Withers, Pres., plans shore drive road between Galveston and Brownsville, distance 250 mi., and San Antonio to Corpus Christi, distance 105 mi.; 25 mi. of system completed around San Antonio, 50 to 100 ft.

wide; detailed plans and specifications for new roadway not completed.

Tex., Snyder.—Scurry county voted \$50,000 bonds to construct roads. Address County Commrs. (Lately noted.)

Va., Fairfax.—Fairfax County Supvrs. let contract Berkeley & Smith, Richmond, Va., at \$36,000 to construct about 32 mi. road in Mt. Vernon Dist.; amount available, \$116,000; call for bids lately noted. (See Machinery Wanted.)

Va., Leesburg.—Loudon County Supvrs. will expend \$43,000 on roads; \$15,000 in Jefferson Dist., \$13,600 in Mt. Gleed Dist., \$5500 in Mercer Dist., and \$6000 in Leesburg Dist.

Va., Norton.—City, T. M. Pepper, Mayor, will expend \$7000 on lately-noted macadam paving; no contracts to be let.

Va., Petersburg.—Finance Committee will recommend to City Council appropriation to pave River and Rock Sts. with vitrified brick and 2d St. with Belgian block; R. D. Budd, City Engr.

W. Va., Beckley.—Raleigh County contemplates voting on about \$200,000 bonds for permanent road improvement; M. J. Meadows, County Clerk. (Lately noted.)

W. Va., Charleston.—City will vote on \$365,000 bonds to pave streets and construct sewers; J. F. Bedell, Mayor. (Lately noted.)

W. Va., Fairmont.—Marion County Commrs. let contract for road construction costing \$314,841.27 and bridge construction costing \$15,000 in Mannington Dist. To Frech & Allen, Baltimore, Md., for Buffalo Rd., 25,437 ft. long, 14 ft. wide, considerable part of brick on concrete foundation and balance of asphaltic concrete with concrete foundation, costing \$88,000; for Whetstone Rd., 10,900 ft. long, 10 ft. wide, asphaltic concrete with concrete foundation, \$30,027.70; Pyles Fork Rd., section 1, 9000 ft. long, 14 ft. wide, brick with concrete foundation, \$39,120.54; Pyles Fork Rd., section 2, 20,846 ft. long, 10 ft. wide, asphaltic concrete with concrete foundation, \$58,823.09. To Lassiter & Ragland, Oxford, N. C., for Downs Rd., 7028 ft. long, 14 ft. wide, brick with concrete foundation, \$31,641.09; Flaggy Meadow Rd., 12,600 ft. long, 10 ft. wide, concrete, \$37,587.85. To Atlantic Bitulithic Co., Richmond, Va., Flat Run Rd., 10,000 ft. long, 10 ft. wide, Warrenite surface with concrete foundation, \$39,641. (Lately noted inviting bids.)

W. Va., Fayetteville.—Fayette county votes June 6 on \$90,000 bonds to macadamize and improve roads. Address County Commrs. (Lately noted.)

W. Va., Parkersburg.—City let contract Cleser & Morse, Marietta, O., at \$28,050.80 to pave Camden Ave. and Broadway Rd. in Tygart Dist.; Wm. Dudley, Clerk. (Call for bids lately noted.)

SEWER CONSTRUCTION

Ala., Thomasville.—City let contract to Sullivan, Long & Hagerty, Bessemer, Ala., for sewer construction; cost \$8000; 3410 ft. 12-in., 810 ft. 10-in. and 11,105 ft. 8-in. terra-cotta, 40 manholes and 11 lamp holes; plans for disposal plant to be installed later; Edgar B. Kay, Engr., Tuscaloosa, Ala. (Lately noted.)

Ala., Thomasville.—City let contract to Bessemer company to construct sanitary sewer system costing \$7000; Edgar B. Kay, Engr., Tuscaloosa, Ala.; L. M. Travick, Mayor. (Lately noted.)

Ark., Little Rock.—Pulaski county, Gordon N. Penz, Commr. of Public Bldgs., will construct sewer from Pulaski county courthouse annex to river; bids until Apr. 28; plans and specifications at office of George H. Mann, Little Rock. (See Machinery Wanted.)

Fla., Ocala.—City votes in June on \$400,000 for sewerage system, etc.; C. W. Hunter, Pres. of Council. (See City and County.)

Ga., Pelham.—City voted \$1000 bonds to extend sewer system. Address The Mayor. (Lately noted.)

Ky., Lexington.—City will construct sanitary sewer on Pratt Ave. from manhole in 6th St. to a point in Pratt Ave., about 575 ft.; bids until Apr. 28; J. E. Cassidy, Mayor. (See Machinery Wanted.)

Md., Baltimore.—City let contract No. 38 \$64,945.25 to construct storm-water sewers; Calvin W. Hendrick, Ch. Engr. (Bids lately noted.)

Mo., Kansas City.—City let contract Halpin-Boyle Construction Co. to lay 5½ mi. 8 to 24-in. sewer pipe.

Mo., St. Louis.—City let contract Century Construction Co., 311 Title Guaranty Bldg., St. Louis, at \$18,500 to construct sewer in Glaise Creek Dist.; 800 ft. 30-in., 300 ft. 24-in., 2580 ft. 18-in., 1690 ft. 15-in. and 2490 ft. 12-in. vitrified clay pipe sewer; W. T. Findley, Secy., City Hall.

N. C., Spencer.—City is constructing 2000 ft. 18-in. sewers under supervision of Thos. Smith, Engr.; cost \$4000 to \$5000; C. G. Thelling, Mayor. (Lately noted.)

N. C., Warsaw.—City engaged J. B. McCrary Co., Atlanta, Ga., to survey city, prepare map and blueprints and estimate cost of constructing sewer system, etc. (See Electric Plants.)

Okl., Bristow.—City will vote May 1 on \$16,000 additional bonds for sewers; \$30,000 already voted; after bond election will let contract for entire work on sewers and disposal plant; Benham Engineering Co., Engr., Oklahoma City. (Previously noted.)

Okl., Stigler.—City let contract Tonkawa Construction Co., Tonkawa, Okla., at \$286.50 to build disposal plant and sedimentation basin and repair present disposal plant; Engrs., Winters & Dive, Fort Smith, Ark. (Further facts lately noted.)

Okl., Sulphur.—City postpones letting of sanitary sewer contract (bids lately noted opened Apr. 18) until May 2; about 60,000 lin. ft., mostly 6-in.; estimate \$52,200; A. V. Avery, Fin. Secy.; H. V. Hinkleley, Cons. Engr., 1013 N. Harvey St., Oklahoma City, Okla. (See Machinery Wanted.)

Tenn., Memphis.—City let contract Noll Construction Co., Chattanooga, Tenn., at \$33,326.96 to construct West Side storm sewer; C. C. Pashby, City Clerk. (Lately noted.)

Tenn., Memphis.—J. H. Weatherford, City Engr., is preparing plans for sewers to furnish connections for 1200 houses; cost \$40,000.

Tex., Henderson.—City, W. E. DeLamar, Secy., is interested in securing construction and operation of sewer system complete. (See Machinery Wanted.)

Tex., Houston.—City will construct sanitary sewers on Milby St.-Baker St. to Willard St. and Willard St.-Milby St. to Whitland St.; bids until Apr. 27; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., Houston.—City will construct sanitary sewers on Bagby St. from McKinney Ave. to Rusk Ave., and Brazos St. from Walker Ave. to Rusk Ave.; also 15 in. connection from Eastwood sanitary sewer to McKinney Ave. sewer; bids until Apr. 30; E. E. Sands, City Engr. (See Machinery Wanted.)

Tex., Palacios.—E. L. Ford (lately noted as having sewer franchise) states company is not fully organized; construct 6 mi. sewer and 2 septic tanks.

Tex., Rosenberg.—City let contract to John Maxcy, Houston, Tex., to construct 15, 13, 21 and 24-in. sewer; cost \$11,500. (Lately noted as selling \$11,500 bonds.)

Tex., Smithville.—Missouri, Kansas & Texas Ry. (A. M. Acheson, Ch. Engr., Dallas, Tex.) will install septic tanks to dispose of sewage of offices and shops.

Va., Vinton.—City opens bids May 7 to construct about 3½ mi. sanitary sewers; terra-cotta pipe and brick manholes; plans on file after Apr. 27 at People's Bank of Vinton; C. Markley & Son, Roanoke, Va., Contractors and Engrs., are completing plans. (Previously noted having voted \$17,000 bonds.)

W. Va., Charleston.—City will vote on \$365,000 bonds to construct sewers and pave streets; J. F. Bedell, Mayor. (Lately noted.)

TELEPHONE SYSTEMS

Ark., Little Rock.—Arkansas-Missouri Telephone Co. increased capital stock from \$25,000 to \$50,000.

Md., Pittsville.—Chesapeake & Potomac Telephone Co. (main office, 5 Light St., Baltimore, Md.) has franchise to construct telephone system.

Okl., Glen Pool.—Glen Pool Mutual Telephone Co., capital \$3000, inceptd. by Fred Markie, John Shaffer and others.

Okl., Mehan.—Stillwater Valley Telephone Co., capital \$2000, inceptd. by C. M. McKenzie and Wm. Varley of Mehan and V. Conroy of Ripley, Okla.

Okl., Mehan.—Stillwater Valley Telephone Co., capital stock \$2000, inceptd. by C. A. McKinzie and Wm. Varley of Mehan and V. Conroy of Ripley.

Va., Norwood.—Nelson County Telephone Co., capital stock \$3000, inceptd. by S. M. Golladay (Pres.), Buffalo Station, Va.; J. L. Gray, D. E. Nelson and others.

Va., National Soldiers' Home.—Government will remodel telephone system; bids until May 4 at office F. E. Skinner, Treas. (See Machinery Wanted.)

TEXTILE MILLS

Ala., Alexander City.—Underwear Yarns.—Bettie Francis Cotton Mills will erect build-

ing of brick construction; install 5472 spindles, etc., to spin underwear yarns; Benj. Russell, Pres. (Lately noted organized to build 6000-spindle plant.)

Ga., Hartwell.—Sheetings.—Hartwell Mills will, it is reported, increase capacity; operates 8000 ring spindles, 200 broad looms, etc.

Ga., Hawkinsville.—Sheetings, etc.—Hawkinsville Cotton Mill Co., capital stock \$100,000, inceptd.; C. P. Gentry, Pres.; will reorganize purchased plant (Southern Cotton Mill) and make necessary improvements; Consult. Engr., Park A. Dallas Co., 913 Candler Bldg., Atlanta. (Lately noted.)

Md., Elkton.—Curtains, etc.—Deibert Mfg. Co., capital stock \$60,000, will organize; W. S. Deibert, Pres.-Mgr.; Elmore Deibert, Treas.; succeed W. S. Deibert Co., Elk Mills, Md.; occupy building being erected by Elkton Development Co.; install 30 looms for weaving curtains and sash covers. (Lately noted.)

N. C., Burlington.—Hosiery.—W. W. Brown is reported interested in plan to establish women's and children's hosiery knitting mill; use 100x60 ft. building.

N. C., East Flat Rock.—Hosiery.—Skyland Hosiery Co. will add 50 knitting machines, increasing daily capacity from 700 to 1200 doz. prs. hosiery.

N. C., Elizabeth City.—Hosiery.—Pasquotank Hosiery Co. decided to erect \$8000 building for hosiery mill; purchased site; install machinery for daily capacity 300 doz. pairs hosiery. (Lately noted organized with \$50,000 capital stock, etc.)

N. C., Roxboro.—Cotton Yarn.—Longhurst Cotton Mills will add 5000 spindles; has let contract.

N. C., Selma.—Hosiery Yarn.—Selma Cotton Mill will increase capacity; install equipment costing \$75,000. (See Machinery Wanted.)

N. C., Tilton.—Hosiery.—Tilton & Sons are located at Tilton, N. H., not N. C. (Lately noted.)

Va., Chase City.—Underwear.—H. P. Butcher, 366 Broadway, New York, plans to establish underwear knitting mill.

Va., Chase City.—Hosiery.—W. E. Butler will establish hosiery knitting mill.

WATER-POWER DEVELOPMENTS

Ga., Eatonton.—City contemplates vote on issuing bonds to construct hydro-electric plant for light and power; may purchase Griffin mill site water-power on Little River. Address The Mayor.

Ga., Cartersville.—Georgia Power Co., Atlanta, is reported as planning construction hydro-electric plant on Etowah River, 4 mi. from Cartersville, to develop 30,000 H. P.

Ky., Louisville.—D. Long Miller and others plan organization Bluegrass Improvement Co. to build hydro-electric plant; propose securing Government permission to develop water-power at Dam No. 41 on Ohio River.

N. C., Elkin.—Carters Falls Power Co., capital stock \$25,000, inceptd. by T. M. Lillard, A. M. Smith, R. H. Chatham and J. T. Hendren; construct hydro-electric plant at Carters Falls, 3 mi. west of Elkin; develop 200 H. P. for transmission to Elkin and Jonesboro; plant will include diverting dam, power-house, transmission system, etc.; Engr., J. B. McCrary Co., Atlanta, Ga. (Lately noted.)

WATER-WORKS

Ala., Ozark.—City voted \$25,000 bonds to improve water-works, and electric-light plant; lately noted to make improvements, drill 10-in. deep well, etc.; B. C. Dowling, Supt. (Lately noted.)

Ala., Phenix City, P. O. Columbus, Ga.—City, Moss Harrison, Mayor, has not yet voted lately-noted \$15,000 water-works bonds, but contemplates such action. (Lately noted as Phoenix, Ala.)

Ala., Thomasville.—City let contract to Bessemer company to construct water-works; concrete or brick buildings; concrete reservoir of 80,000 gals. capacity; cost \$18,000; Edgar B. Kay, Engr., Tuscaloosa, Ala.; L. M. Travick, Mayor. (Lately noted.)

Fla., Jacksonville.—City let contract to F. W. Long of Jacksonville at about \$35,000 to remodel old water-works as pumping-house and electrical sub-station; plans and specifications by Sargent Hamilton. (Call for bids lately noted.)

Fla., Ocala.—City votes in June on \$400,000 bonds for water-works, etc.; C. W. Hunter, Pres. of Council. (See City and County.)

Ga., Forsythe.—Solomon-Norcross Co., Consult. Engr., Candler Bldg., Atlanta (lately noted preparing plans to increase watersupply), states definite improvements

not contemplated at present; report on well only made to determine capacity.

Ga., Pelham.—City voted \$4000 bonds to extend water and light system. Address The Mayor. (Lately noted.)

Md., Brooklyn.—Brooklyn & Curtis Bay Water & Light Co. will construct water-works; plans and specifications being prepared.

Md., Mt. Airy.—City votes May 4 on \$20,000 bonds for water-works and other improvements. Address The Mayor.

Mo., Charleston.—City, Roy Strickland, Clerk, will drill well; 100 to 250 ft. deep; bids until Apr. 27; Frank L. Wilcox, Engr., Syndicate Trust Bldg., St. Louis, Mo. (See Machinery Wanted.)

Mo., Chillicothe.—City votes May 4 on \$100,000 bonds to purchase or construct water plant. Address The Mayor.

Mo., Dexter.—City, Jno. I. Moore, Clerk, will drill deep well; bids until Apr. 28; Frank L. Wilcox, Engr., Syndicate Trust Bldg., St. Louis, Mo. (See Machinery Wanted.)

N. C., Gastonia.—City let contract to construct settling basin with capacity 7,000,000 gals. water on Lon Creek. Address The Mayor. (Lately reported voted \$20,000 bonds for water and light extensions.)

N. C., Warsaw.—City engaged J. B. McCrary Co., Atlanta, Ga., to survey city, prepare map and blueprints and estimate cost of constructing water-works, etc. (See Electric Plants.)

Okla., Boswell.—City voted bond issue to construct water-works. Address The Mayor.

Okla., New Cordele.—City will sell \$55,000 water-works extension bonds; Benham Engineering Co., Engr., 435 American National Bank Bldg., Oklahoma City.

Okla., Perry.—City voted \$25,000 bonds for water-works, including standpipe, mains, etc.; Engr., J. G. Cronin, Perry.

S. C., Columbia.—City will lay water mains with appurtenances in Gist, Elmwood and Bull Sts. in accordance with plans and specifications by F. C. Wyse, Engr.-Supt.; bids until Apr. 29; lately noted voting \$500,000 bonds for water-works and sewer extension. (See Machinery Wanted.)

Tenn., Chattanooga.—Tennessee Valley Water Co., capital \$100,000, inceptd. by J. W. Adams, G. B. Adams, M. N. Whitaker and others; reported as contemplating to supply towns in lower Sequatchie Valley with water.

Tex., Canadian.—City voted additional \$400 bond issue to lay water mains in outlying sections. Address The Mayor. (Lately noted to have let contract at \$31,000 to Kansas City company to construct water-works.)

Tex., Franklin.—City voted \$17,500 bonds to construct water-works and electric-light plant. Address The Mayor.

Tex., Hillsboro.—City has not voted water-works bonds. (Recent report incorrect.)

Tex., Lockhart.—Boyd Smith, San Marcos, Tex., and associates will construct water-works and ice factory.

Tex., Rosenberg.—City will expend \$25,000 to install water-works; 400,000 gals. per 24 hours; erect brick building, 21x36x14 ft.; install oil engines and force pump; construct earthen reservoir; 500,000 gals. capacity; construction by force account; machinery purchased; John Maxcy, Engr., Houston. (Lately noted let contract to Mr. Maxcy.)

WOODWORKING PLANTS

Ga., Albany.—Sashes, Doors, etc.—Albany Sash, Door & Lumber Co., capital stock \$200, inceptd. by F. B. Leonard and R. B. Saunders.

Ga., Brunswick.—Veneer, etc.—Georgia Veneer & Package Co. purchased 40 acres additional; erect addition to main factory to double capacity; erect steel water tank with capacity 50,000 gals. on 89-ft. steel tower, and install automatic sprinkling system.

Ga., Kingsborough.—Cooperage.—Kingsborough Cooperage Co., capital \$10,000, inceptd. by W. W. Williams and A. A. Bigley of Kingsborough, W. J. Ledbetter of Columbus, Ga., and J. T. Moore of Russell county, Ala.; mfrs. barrels and kegs.

Ga., Macon.—Barrels, Crates, etc.—Southern Package Mfg. Co., 514 Georgia Life Bldg., let contract Griffin-Edwards Construction Co., Georgia Life Bldg., to erect and equip plant to mfr. barrels, crates, etc.; main mill of frame construction, 100x75 ft.; veneer of frame, 80x50 ft.; drykiln of brick construction; steam vats of brick and reinforced concrete; most of machinery purchased; total cost \$30,000.

Ky., Colly.—Staves.—West Virginia Stave & Lumber Co., Chas. W. Hurst, Mgr., will in-

stall stave mill to cost \$2500; no buildings; daily capacity 9000 staves. (Lately noted to establish mill to mfr. 10,000,000 to 12,000,000 staves.)

Ky., Jackson.—Veneers and Novelties.—S. E. Patton is reported as contemplating installing veneer plant to include sliced and rotary veneer machinery.

Ky., Louisville.—Cooperage.—Philip Sengel & Son will erect cooperage at 930 Mason St.; to cost \$8000.

Ky., Mayking.—Staves.—Valley Creek Lumber Co., Rochester, N. Y., is reported to install stave mill.

Ky., Whitesburg.—Staves.—T. C. Seaman Stave Co., Winchester, Ky., is reported to have purchased boundary of Big Leatherwood Creek timber and to install stave mills.

La., New Orleans.—Cooperage.—General Cooperage & Timber Co., capital \$100,000, organized with H. B. Carter, Prest.; A. J. Carter, V.-P.; C. A. McQuay, Secy.-Treas. (Lately noted inceptd.)

Mo., New Madrid.—Cooperage.—Babeck Cooperage Co., capital stock \$9000, inceptd. by Geo. A. Babeck, W. D. Knott and M. J. Courau.

N. C., Bethel.—Barrels, etc.—Bethel Mfg. Co. will rebuild barrel factory reported burned at estimated loss \$9000.

N. C., Winston-Salem.—Furniture.—Forsyth Furniture Co. will erect factory building; 3 stories; frame; 61x208 ft.; composition roof; cost \$10,000; Fogle Bros. Co., contractor, Winston-Salem.

Okla., Muskogee.—Wagon Wood.—Muskogee Wagon Wood Co. organized; will establish plant; A. M. Kirkland of Pioneer Hardwood Co., Wagoner, Okla., is Prest.

Tenn., Memphis.—Auto Spokes, etc.—Kelsey Wheel Co., John Kelsey, Prest., Detroit, Mich., will expend \$25,000 to erect factory building; 60x300 ft.; fireproof; construction by owner; install auto-wheel machinery to cost \$12,000; daily output 70,000 spokes, 1000 sets bent rims and 400 sets finished wheels. (Lately noted letting general sewer and grading contract to C. S. Ginn.)

Tenn., Sequatchie.—Handles.—Haskew Lumber Co. will install machinery to mfr. broom handles; purchased machinery costing \$3000.

FIRE DAMAGE

Ala., Berry.—F. W. Johnson's store; D. W. Johnson's store; McRay & Wood's drug store; postoffice; 2 barber shops; Telephone Exchange; J. N. Patterson's residence; Bank of Berry; total loss \$60,000.

Ala., Lewisburg.—Dr. A. C. Watt's sanitarium at Fulton Springs, near Lewisburg; loss \$6000.

Ark., Harrisburg.—Weiner Rice Mill partially burned.

Fla., Fort Myers.—S. W. Brown's residence in Edgewood, owned by G. B. Reynolds; loss \$4000.

Fla., Tampa.—Bigica & Diana Dairy's 3 cattle sheds, milking pen, several feed barns and other buildings.

Fla., Tampa.—Jetton Lumber Co. plant and other buildings; loss \$150,000.

Ga., Ashburn.—Ashburn Oil Mills' fertilizer plant; loss about \$20,000.

Ga., Athens.—Eberhart & Davis' store; M. Link & Son's store in buildings owned by DuPre estate; loss \$5000.

Ga., Nashville.—Dr. P. H. Askew's residence; loss \$3000.

La., Bunkle.—Avoyelles Wholesale Grocery Co.'s store; loss \$30,000.

La., New Orleans.—Jos. Rice's building at Marais and Iberville Sts.; loss \$15,000.

La., Oakdale.—A. J. Odom & Son's store; loss \$12,000.

La., Shreveport.—R. W. Wilson's residence; loss \$5000.

Md., Baltimore.—Jas. B. Macneal & Co.'s paint plant at Warner and Wooster Sts.; estimated loss, \$30,000.

Md., Ellicott City.—Mrs. Mary Riggs' residence at Cooksville.

Md., Princess Anne.—Princess Anne Lumber Co.'s saw and planing mill; loss \$5000.

Miss., Shuqualak.—Methodist church, loss \$3000. Address The Pastor.

Mo., Cave Spring, R. F. D. from Willard.—Cave Spring Lead & Zinc Co.'s Happy Rock mine equipment; loss \$4500.

Mo., St. Louis.—Koerner Lumber Co.'s plant at 3628A S. Broadway; estimated loss on machinery in dressing plant, \$25,000 to \$30,000.

Mo., St. Louis.—Independent Lumber Co.'s building, J. T. Addis Wrecking Co.'s building at 3300 Salena St.; loss \$50,000.

N. C., Charlotte.—O. H. Balle's residence in Steele Creek.

N. C., Bethel.—Bethel Mfg. Co.'s barrel factory; estimated loss \$9000.

S. C., Kershaw.—R. C. Bennett's blacksmith shop.

S. C., Manning.—J. T. Brogdon's store in Sammy Swamp section; loss \$8000.

S. C., Spartanburg.—Barn on Spartanburg County Home Farm; loss \$3000. Address County Comms.

Tenn., Trezevant.—H. Argo & Son's flour mill, cotton gin and iron foundry; loss \$12,000.

Tex., Beaumont.—Geo. P. Sweet's residence at 1509 Bibb Ave.; loss \$6000.

Tex., Dallas.—Building at 1302 Elm St., owned by A. H. Graham and occupied by Oriental Art Shop; loss \$15,000.

Tex., Huntsville.—Municipal water-works; loss \$10,000. Address The Mayor.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Fla., Fort Myers.—A. J. Moore will erect store and apartment building. (See Stores.)

Ga., Atlanta.—G. T. R. Fraser will erect apartment-house, 63x55 ft.; 2 stories; four apartments of five rooms each; brick and veneer; steam heat; tile, tar and gravel roof; tiled verandas; marble entrance; plans by J. C. Battle, Archt., 522 Grant Bldg., Atlanta.

Ga., Atlanta.—Jas. L. Wright will erect store and apartment-house; 2 stories; 3 stores on ground floor; 30 rooms; cost \$20,000.

Ga., Savannah.—C. Kohler will expend \$8000 (cost without mechanical equipment) to erect apartment-house; 25x75 ft.; ordinary construction; tin roof; fireplaces and grates; J. de Bruyn Kops, Archt., Savannah. (Lately noted.)

Ky., Louisville.—Ninaweb Land Co. will erect 3-story brick apartment-house at 1st and Caldwell Sts.; cost about \$12,000.

Mo., Kansas City.—Chas. Weill will erect 3-story flat and store building at 12th St. and Woodland Ave.; cost \$25,300.

Mo., St. Louis.—Canterbury Investment Co. will erect two 2-story tenement-houses at 422-28 Wise St.; cost \$10,000.

Mo., St. Louis.—Philip Brenner will erect store and tenement building. (See Stores.)

Mo., St. Louis.—Edw. L. Kuhs will erect 2-story tenement-house at 3338-40 Church Rd.; cost \$6500; construction by owner.

Mo., St. Louis.—F. J. Cornwell & Son will erect apartment-house; 70x106 ft.; cost (without mechanical equipment) \$56,000; ordinary construction; composition roof; low-pressure steam heat; plans and construction by owner. (Trade Realty Co. lately noted to erect tenement-house.)

Tex., Galveston.—Mrs. Moxie Bauxright will erect apartment-house; metal roof; cost \$4000.

Va., Richmond.—Davis & Archer will erect tenement-house on Davis Ave.; 2 stories; brick; cost \$3500; construction by owners.

W. Va., Weston.—John Connell contemplates erecting store and apartment building. (See Stores.)

W. Va., Wheeling.—Jacob Sentlinger will erect flats at 5th and Main Sts.; cost \$5500.

ASSOCIATION AND FRATERNAL

Ky., Horse Cave.—A. F. and A. M. will erect brick building. Address proposals to W. R. Lyons. (See Machinery Wanted.)

La., Shreveport.—A. F. and A. M., Scottish Rite Masons, Ernest R. Bernstein, Prest. of Directors, let contract in May to erect Scottish Rite Cathedral; 115x130 ft.; 3 stories; cost (without mechanical equipment) \$120,000; fireproof; asphalt and gravel roof; hot-bath and steam heat to cost \$12,000; Edw. F. Neild, Archt., Shreveport. (Lately noted.)

Md., Baltimore.—E. P. O. E. invited following bidders to estimate on construction of building on Fayette St. near Howard St.: Jno. O. Hederman, 15 E. Fayette St.; Fred Decker & Son, 1209 E. Biddle St.; J. J. Walsh & Son, 1533 Maryland Ave.; Morrow Bros., Fidelity Bldg.; W. H. Porter & Son, 507 Forest St.; M. C. Davis, 15 E. Fayette St.; J. Henry Miller & Co., Eutaw & Franklin Sts.; Henry Smith & Sons, 7 E. German St.;

Tex., Kosse.—Farmers' Cotton Oil Co. mill; reported loss \$50,000.

Tex., Mound.—Mound Baptist Church's parsonage; Rev. Thos. B. Ramsey, pastor.

Tex., Sherman.—Residences of Dr. W. F. Blair, Mrs. Blanche Blair, D. B. Lyon and J. F. Thompson; loss \$7000.

Tex., Taylor.—Icyurgus Nelson's barn; loss \$4000 to \$5000.

Tex., Waco.—Joe Robinson's residence and cotton-reclaiming plant.

Va., Buena Vista.—Leas & McVitty Tannery Co.'s chip-drying plant; loss \$15,000.

Va., Green Spring Depot.—Dunkun Bros' store.

Va., Port Norfolk, P. O. at Portsmouth.—Planters' Mfg. Co.'s 2 warehouses, storehouse, etc.; loss \$37,000.

W. Va., Bluefield.—Mat King's residence at 374 S. Bland St.; loss several thousand dollars.

Irwin & Leighton, Keyser Bldg.; B. F. Bennett Bldg. Co., 123 S. Howard St.; John Hiltz & Sons, 7 Clay St.; Chas. L. Stockhausen, Marine Natl. Bank Bldg., all of Baltimore; Geo. A. Fuller Co., Munsey Bldg., Washington; bids due May 11; plans by Wyatt & Nolting, Keyser Bldg., Baltimore, call for 6 stories and roof garden; brick and terra-cotta; 60x156 ft.; cost about \$295,000, including site. (Lately noted.)

Md., Churchville.—Mispah Lodge, I. O. O. F., plans to erect building.

Tenn., Coal Creek.—I. O. O. F. is reported to erect building to replace burned structure; 2 stories; brick; cost about \$9000.

Tenn., Dyersburg.—B. P. O. E. is reported to erect lodge and office building at Main and Masonic Sts.; 5 stories.

Tenn., Murfreesboro.—B. P. O. E. will erect building; cost about \$10,000.

Tex., Cleburne.—Cross Timbers Camp, W. O. W., will erect building; 2 stories; brick and stone; R. L. Bartley, H. W. Wiseman and E. H. Baird, Com.

Va., Richmond.—F. P. McConnell, care of Manchester National Bank, and associates will erect lodge, bank and office and lodge building. (See Bank and Office Bldgs.)

BANK AND OFFICE

Ark., Fort Smith.—Fort Smith Bank & Trust Co., Dr. W. R. Brookshier, Prest., Garrison Ave. and 6th St., will expend \$25,000 to remodel building at Garrison Ave. and 8th St.

Ark., Shirley.—Settlement Bank is reported to erect bank building; brick; cost \$5000.

Fla., Miami.—Walter Waldin and others will erect store, office and theater building. (See Stores.)

Fla., Orlando.—J. L. Gurnsey will erect building to contain offices. (See Stores.)

Fla., Trilby.—Dr. W. G. DeVane and associates will erect bank building; brick; stone; marble; steel; metal roof; fireproof; plumbing; cost \$8000.

Ga., Macon.—Citizens' National Bank receives bids May 4 to erect bank and office building; 40x105 ft.; slag roof; low-pressure steam heat; electric elevators; W. L. Stoddart, Archt., 30 W. 35th St., New York. (Lately noted to cost \$200,000.)

Ga., Nicholls.—Bank of Nicholls, C. C. Mertens, Cash, will erect 1-story building; 55x70 ft.; to contain banking offices and stores.

Ga., Savannah.—Citizens' and Southern Branch Bank is having plans prepared by Mowbray & Uffinger, 55 Liberty St., New York, for improvements and addition to bank building; 30x50 ft.; stone; cost \$75,000; completion by Oct. 1.

Ky., Blackford.—M. A. McCarthy will open bids to rebuild office building; 20x40 ft., with 10x8-ft. wing; 2 stories; mill construction. (Lately reported burned.)

Md., Arlington.—Commercial Bank of Maryland has plans by Owens & Sisco, Continental Bldg., for bank building in West Arlington; 2 stories; 50x50 ft.; brick; contractors estimating are C. C. Watts, 113 W. Hamilton St.; Phillip Watts & Son; E. G. Turner, Bateman Ave.; W. T. Childs, 14-16 W. 20th St.; Howard Park Constr. Co.; Consolidated Engineering Co., Gunther Bldg.; John Hiltz & Sons, 7 Clay St.; Cowan Bldg., 106 W.

Madison St.; G. Walter Tovell, Eutaw and Dolphin Sts.; W. E. Burnham, Law Bldg.; A. F. West, 15 E. Fayette St., all of Baltimore.

N. C., Durham.—First National Bank has plans by Milburn, Heister & Co., 710 14th St. N. W., Washington, D. C., for bank building; 8 stories; 60x90 ft.; plans ready for contractors about July 15; will remove present 2-story brick building from site and construct foundation; architects have charge of moving old building. (Lately noted.)

N. C., Scotland Neck.—Bank of Scotland Neck has plans by Benton & Moore, Wilson, N. C., for building; 50x76 ft.; cost (without mechanical equipment) \$20,000; tar and gravel roof; low-pressure steam heat; direct and indirect lighting.

S. C., Charleston.—J. D. Newcomer, Archt., 32 Broad St., Charleston, receives bids until May 20 to remodel and erect addition to building and construct limestone front at 253 King St. for Citizens' Bank; separate bids for construction, plumbing and hot-water heating; plans and specifications at office of architect as above; 2 stories, with 3-story effect; rounded plate-glass entrance; marble vestibule, with tile floor; skylight. (Lately noted.)

Tenn., Dyersburg.—B. P. O. E. is reported to erect lodge and office building. (See Association and Fraternal.)

Tenn., Lebanon.—F. C. Stratton, Cash. Lebanon National Bank, is reported to erect office building to cost about \$25,000.

Tenn., Nashville.—V. E. Schwab will erect office building at 8th Ave. and Church St.; 175x165 ft.; 5 stories; fireproof; gravel roof; steam heat; electric elevators; cost \$250,000; S. C. Zilhaft, lessee; Marr & Holman, architects, Nashville.

Tenn., Nashville.—Capitalists acquired through C. C. Christopher site at Church St. and Polk Ave.; will erect office building; Mr. Christopher wires Manufacturers Record: "Site 127x150 ft.; building 6 stories; terra-cotta; cost about \$300,000; several architects preparing competitive plans."

Tenn., Nashville.—Vaulx estate and Johnson Bransford have plans by Asmus & Norton, Cole Bldg., Nashville, for store and office building on 6th Ave.; interchangeable fireproof partitions; 2 high-speed elevators; steam heat; mail chutes; tile floors and wainscoting in halls, corridors; warehouse in rear; architects wire Manufacturers Record: "Office building 90x90 ft.; 5 stories; steel frame; terra-cotta front; brick walls; sprinkler system; cost not determined; warehouse, 90x85 ft.; 3 stories; brick walls; mill construction; sprinkler system."

Tenn., Waverly.—Farmers and Merchants' Bank will rebuild bank. (Lately reported burned.)

Tenn., Waverly.—Citizens' National Bank will rebuild bank. (Lately reported burned.)

Tex., Bastrop.—Citizens' State Bank will erect building.

Tex., Fort Arthur.—Merchants' State Bank will erect building; 2 stories; brick; 80x110 ft.; cost \$50,000.

Tex., Greenville.—Eastern Texas Traction Co., Forest E. White, Prest., Galveston, Tex., is reported to erect office building; ornamental brick.

Tex., Hamiltonburg.—Chas. Tips has plans by Leo M. J. Dielmann, San Antonio, Tex., for bank; 1 story; 24x60 ft.; ordinary construction; composition roof; cost \$5000; bids opened Apr. 20. (Lately noted.)

Tex., Waco.—W. T. Watts lets contract in about 60 days to erect office, store and hotel building to cost \$400,000; lately noted. (See Hotels.)

Va., Bedford City.—J. D. Ballard is reported to erect bank and office building to be occupied in part by bank being organized; brick construction.

Va., Newport News.—D. Berlin has plans for office and store building. (See Stores.)

Va., Richmond.—F. P. McConnell, care of Manchester National Bank, and associates invite bids to erect bank, store and lodge building at Cor. Hull and 11th Sts.; 45x155 ft.; fireproof or slow-burning construction; metal, slate or other good roof; electric lighting; construction in about 3 months; Marcus Hallett, Mutual Bldg., Richmond, lately noted preparing plans. (See Machinery Wanted.)

W. Va., Bower.—Davis Colliery Co., Elkins, W. Va., will expend \$15,000 to erect office and store building lately noted. (See Stores.)

W. Va., Clarksburg.—S. W. Ford is preparing plans for store and office building; fireproof; 7 stories; 40x95 ft.; cost \$65,000; probably receive bids about May 15.

CHURCHES

Ala., Cullman.—First Baptist Church, R. E. Lee, Chrmn. of Building Comm., has plans by E. J. Love, Birmingham, for building; 40x70 ft. with 30x40-ft. wing; lumber frame; pressed brick veneer; cost \$18,000; metal roof; hot-air furnace heat to cost \$450; electric lighting; probably open bids May 10. (Lately noted.)

Ala., Lafayette.—Methodist church will erect building. Address The Pastor.

Ark., Hot Springs.—Central M. E. Church has plans by John Galsford, Memphis, Tenn., for building to replace burned structure; brick and stone; seating capacity on lower floor of 1200; cost \$80,000; W. S. Sorrells, Chrmn. Building Com. (Previously noted.)

Fla., Blountstown.—Methodist church opens bids May 1 to erect church and Sunday-school building; 50x75 ft.; fireproof; metal or cypress shingle roof; cost \$6000; address proposals to R. Pennington. (Lately noted.)

Fla., Fort Myers.—Presbyterian Church will erect building. Address The Pastor.

Fla., Mulberry.—Methodist congregation will erect church to cost \$12,500. Address The Pastor.

Fla., Orlando.—First Baptist Church, Rev. Edw. J. Poulson, pastor, has plans by J. E. Greene, Birmingham, Ala., for building; 90x90 ft.; ordinary construction; tile roof; cost \$25,000.

Fla., Sarasota.—Methodist Church, Rev. Jno. A. Morrow, pastor, plans to erect building.

Ga., Adel.—M. E. Church, Rev. Chas. W. Curry, pastor, will let contract in May to erect building; 85x40 ft.; ordinary construction; slate or tile roof; steam heat; electric lighting; address proposals to L. P. Booth, Adel. (Lately noted.)

Ga., Atlanta.—Colored Episcopal Church, Rev. Eugene Henderson, Pastor, 418 Houston St., will erect church and parish house; former, rock and half-timber; latter, brick or concrete and to contain gymnasium, cooking school, library, etc.; Henrietta C. Dozier, Archt., 1322 Hurt Bldg., Atlanta.

Ga., Glennville.—Baptist congregation will expend \$8000 to \$10,000 to erect building; ordinary construction; wood frame; metal roof; hot-air furnace; electric lighting; day labor, supervised by I. F. Legget. (Lately reported.)

Ga., Madison.—Methodist Episcopal Church, W. C. Thompson, Secy., will erect church and Sunday-school room; cost \$25,000 to \$30,000.

Ga., Powder Springs.—Baptist congregation, Rev. M. Brookhart, Pastor, will erect building covered with cement; seating capacity 400; Sunday-school rooms; furnace heat; plans by Miss H. C. Dozier, 1322 Hurt Bldg., Atlanta.

Ga., Thomaston.—Primitive Baptist church will erect building; Mrs. Job Stewart, Mrs. Will Pye and Mrs. Carrie McNeice, Com.

Ky., Louisville.—Broadway African Methodist Episcopal Zion Church will erect building at 13th St. and Broadway; cost \$30,000.

La., McDonoughville.—Methodist Church, Rev. A. J. Gearhardt, pastor, will erect building; 2 stories; brick and frame.

La., New Orleans.—Soniat Avenue Christian Church will erect church and parsonage at Henry Clay and St. Charles Aves.; cost about \$50,000; Jno. F. Charlton of Danemann & Charlton and Rudolph Roselle, Archts.

Md., Baltimore.—Mt. Calvary P. E. Church, Rev. Wm. A. McClellan, rector, 316 N. Eutaw St., plans to erect building on site of present structure; probable cost \$300,000.

Md., Baltimore.—Lutheran Church of the Reformation, Caroline and Lanvale Sts., receives bids until Apr. 24 to rebuild burned structure; plans by J. E. Laferty, 11 E. Pleasant St., Baltimore; structure 80x90 ft.; cost about \$40,000; contractors estimating are John Hiltz & Sons, 7 Clay St.; B. F. Bennett Bldg. Co., 123 S. Howard St.; J. Henry Miller, Inc., Eutaw and Franklin Sts.; C. C. Watts, 113 W. Hamilton St.; Cowan Bldg. Co., 106 W. Madison St.; Henry Momberger, 34 W. Chase St.; E. G. Turner, Bateman Ave., and J. A. Horn, all of Baltimore; Chas. J. Gross, Chrmn. Bldg. Com., 916 E. North Ave. (Lately noted.)

Md., Govans.—First English Lutheran Church has plans by John Freund, Jr., Hoffman Bldg., Baltimore, for building on York Rd.; contractors estimating are Fidelity Construction Co., Knickerbocker Bldg., Cowan Bldg. Co., 106 W. Madison St.; B. J.

McCullough & Co., 2026 Vine St.; Chas. L. Stockhausen, Marine Natl. Bank Bldg.; Blake & Engle, Law Bldg.; Jno. A. Horn; T. B. Stanfield, 109 Clay St., all of Baltimore; bids opened Apr. 24. (Previously noted.)

Md., Hagerstown.—First Brethren Church has plans by A. J. Kilnhart, Hagerstown, for building; red brick; terra-cotta trimmings; 38x86 ft.; main auditorium, including balcony, to seat 475; Sunday-school to contain 9 classrooms; cost \$15,000.

N. C., Concord.—First Presbyterian Church will expend about \$3000 to improve building; increase seating capacity, repaint and redecorate interior; J. W. Cannon, E. C. Barnhardt and A. Jones Yorke, Com.

N. C., Newsom.—Methodist Episcopal Church is reported to erect building. Address The Pastor.

N. C., Sanford.—First M. E. Church has plans by Sayre & Baldwin, Blackley Bldg., Anderson, S. C., for building; double auditorium; 2-story Sunday-school addition; face brick exterior; stone trimmings; metal roof; classic design; mechanical heat and ventilating; electric lighting; open bids in about 30 days.

S. C., Greenville.—St. Philips Colored Episcopal Church will erect building; Robt. Bagwell, rector in charge, Spartanburg, S. C.

Tenn., Chattanooga.—Highland Park Baptist Church, Rev. W. S. Keese, Pastor, will rebuild structure at cost of \$25,000 to \$30,000; brick.

Tenn., Maryville.—First Baptist Church has plans by J. E. Greene, Birmingham, Ala., for building; 35x90 ft.; ordinary construction; cost \$20,000. (Lately noted.)

Tex., Dallas.—Central Presbyterian Church, Rev. J. Frank Smith, pastor, is reported to erect building at Harwood and Bryan Sts.

Tex., Fort Worth.—Trinity Episcopal Church will erect building at Lipscomb & Cleveland Sts.; cost \$60,000. Address The Pastor.

Tex., Hondo.—Baptist Church, W. L. Martin, Chrmn. Bldg. Com., receives bids until Apr. 27 to erect building; seco brick; plans and specifications at office of J. M. Hyde, Archt., Brenham, Tex., and Windrow's Drug Store, Hondo, and may be obtained on application to W. H. Windrow.

Tex., Waco.—Central Christian Church has plans by Roy E. Lane, Waco, to remodel building at Washington and 11th Sts.; cost \$15,000.

Va., Harrisonburg.—Hebrew congregation, Rev. J. Schwanefeld, rabbi, will erect synagogue; cost \$10,000.

Va., Charlottesville.—St. Paul's Protestant Episcopal Church will erect chapel. (See Schools.)

Va., Portsmouth.—R. R. Richardson & Co., Norfolk, are lowest bidders at \$10,400 to erect additions to Central Methodist Church; Osce Dashiell of Portsmouth is lowest bidder at \$2358 for plumbing and heating; B. F. Mitchell, Archt., Norfolk, Va. (Lately noted.)

Va., Richmond.—Cowardin Ave. Christian Church will erect Sunday-school addition; 38x50 ft.; ordinary construction; slate roof; cost \$10,000; architect not selected; construction latter part of May; address proposals to J. F. Fry, 1725 Buchanan St. (Lately noted.)

W. Va., Weston.—Catholic Church has plans by Albert Breternitz for building and school; former, 50x100 ft.; latter to contain 8 rooms; ordinary construction; tile roof; cost (without mechanical equipment) \$50,000; steam heat; electric lighting to cost \$1500; construction by May 1. (Lately noted.)

CITY AND COUNTY

Fla., Deland.—Municipal.—City is reported to vote on about \$40,000 bonds to erect city buildings. Address The Mayor.

Fla., Ocala.—City Hall, etc.—City votes in June on \$400,000 bonds to erect library, city hall, fire station, sewerage system with Imhoff tank, several miles paving and water plant; C. W. Hunter, Prest. of Council. (Lately noted having blueprints of proposed civic center buildings, etc.)

Fla., Orlando.—Public Building.—City and Board of Trade will, it is reported, erect building for various organizations, city departments, etc.

Ga., Atlanta.—Fire Station.—Municipal Board of Firemasters will erect 2 fire stations; fire brick and concrete; cost \$3000 and \$6500; Morgan & Dillon, Archts., Atlanta; bids being received.

Ga., Eatonton.—Library.—City will erect \$6000 Carnegie Library. Address The Mayor.

Ga., Moultrie.—Jail.—Chairman of Colquitt

County Commrs. receives bids until May 16 to erect 3-story jail building; plans and specifications at office of board at Moultrie, and Southern Structural Steel Co., Archt., San Antonio, Tex., and Birmingham, Ala.

Ga., Pelham.—Fire Department and Jail.—City will erect municipal building to cost about \$6500; brick; steel or reinforced concrete cells; engaged P. E. Dennis, American Natl. Bank Bldg., Macon, as adviser in architectural competition for plans for same; voted \$5000 bonds. (Lately noted.)

Ky., Hazard.—Jail.—City is reported to soon let contract to erect jail. Address The Mayor.

Ky., Hazard.—Jail.—Perry County Commrs. will erect jail to cost about \$25,000.

La., New Orleans.—Warehouses, etc.—Ford, Bacon & Davis, 115 Broadway, New York, state they have been engaged by Board Port Commrs. to design and supervise construction of warehouses, etc. (See Warehouses.)

La., Shreveport.—Jail.—Caddo Parish Police Jury is considering erection of jail at cost of about \$25,000.

N. C., Raleigh.—Barns and Stables.—City will erect barns and stables for street and sanitary equipment. Address The Mayor.

N. C., Wilmington.—Jail.—New Hanover county will erect reinforced concrete jail according to plans and specifications by Jas. F. Cause, Jr., 30 Odd Fellows' Bldg., Wilmington; main building 152x42 ft., with wing 31x100 ft.; built-up roof; bids until May 12. (Previously noted.)

N. C., Wilmington.—Jail.—New Hanover county opens bids May 12 to erect convict headquarters at county farm; main building 156x42 ft.; heating plant, pumping machinery, electrical machinery, engine-room and laundry in basement; wing 34x100 ft.; cost (without mechanical equipment) \$25,000 to \$30,000; semi-fireproof and reinforced concrete construction; built-up roof; steam heat to cost \$3000; electric lighting; Jas. F. Cause, Jr., Wilmington, Archt., to whom proposals may be addressed. (Lately noted.)

S. C., Florence.—Library.—City will erect \$10,000 Carnegie Library. Address The Mayor.

Tex., Calvert.—Firemen's Hall.—City is reported to vote on \$5000 bonds to complete firemen's hall. Address The Mayor.

Tex., Terrell.—City Hall.—City, Joel R. Bond, Mayor, receives bids until May 5 to erect city hall except heating and plumbing; 100x100 ft.; fireproof; steam heat; electric lights; cost \$40,000 without mechanical equipment; plans and specifications at office of Van Slyke & Woodruff, Archts., 515 W. 5th St., Fort Worth. (Lately noted.)

W. Va., Charleston.—Market, City Hall, etc.—City will not vote on bonds for city hall, market and library site. Address The Mayor. (Lately noted.)

COURTHOUSES

Fla., Fort Myers.—Lee County Commrs., H. A. Hendry, Clerk, receive bids until May 4 to erect courthouse; plans and specifications at office of Mr. Hendry, Fort Myers, and F. J. Kennard, Archt., 409 American National Bank Bldg., Tampa. (Previously noted.)

Tex., Falfurrias.—Brooks County Commrs. receive bids until May 4 to erect courthouse; reinforced concrete, faced with brick; terra-cotta columns; cost \$65,000; Alfred Giles Co., Archts., San Antonio, Tex. (Lately noted.)

DWELLINGS

Ala., Birmingham.—J. L. Drennen will erect residence; 2 stories; brick veneer; cost \$9000.

Ala., Birmingham.—John Milner Caldwell is reported to erect residence on Red Mountain.

Ala., Birmingham.—J. J. Blount will erect residence; 2 stories; fireproof; day labor; cost \$8000.

Ala., Birmingham.—Otto Marx is reported to erect residence on Red Mountain.

Ala., Goshen.—J. C. Wilson has plans for residence; cost \$5000.

Ala., Mobile.—C. N. Owen will erect residence; 10 rooms; cost \$10,000.

Ark., Little Rock.—Brooks Bros. will erect 1½-story residence at 2103 Gaines St.; cost \$6000.

D. C., Washington.—D. L. Johnson, 1702 P St. N. W., will not erect dwelling, as lately reported.

D. C., Washington.—A. C. Moses, The Burlington, will erect 7 dwellings at 230-242 Kentucky Ave.; 2 stories; brick; cost \$19,250; construction by owner.

D. C., Washington.—H. G. Smithy will erect 3 two-story frame dwellings to cost

\$12,500; plans by W. R. Talbott, 1314 F St. N. W.; construction by owner.

D. C., Washington.—Harry Wardman, K St. near 15th St., will erect dwelling at 1426 Buchanan St. and 6 dwellings at 4511-21 15th St. N. W.; cost \$25,000.

D. C., Washington.—W. Preston, 719 S St. N. W., has plans by Hunter & Bell, 1421 H St. N. W., Washington, for 5 two-story brick dwellings at 497-17 Columbia Rd. N. W.; cost \$12,500; construction by owner.

Fla., Dunedin.—L. W. Smith, Tampa, Fla., will erect residence; 8 rooms; concrete.

Fla., Fort Meade.—Methodist church, Rev. J. L. Kilgore, pastor, will erect parsonage.

Fla., Jacksonville.—Brown Realty Co. will erect 2-story dwelling on 11th St.; cost \$3250.

Fla., Jacksonville.—Mrs. N. W. Redmond has plans by Talley & Summer, St. James Bldg., Jacksonville, for residence; frame and brick veneer; tile roof; hot-air heat; cost \$8000.

Fla., Lake Worth.—Bryant & Greenwood will expend \$1500 to \$2000 each to erect 20 bungalows; 4 to 7 rooms each; ordinary construction; composition roof; electric lighting; H. C. Bartholomew, Archt., and supervisor of construction; lately noted. (See Machinery Wanted.)

Fla., Leesburg.—W. H. Carr, Leesburg, is reported preparing plans for \$5000 bungalow and garage.

Fla., Orlando.—J. L. Giles will erect residence on Lake Lucerne to cost \$4000.

Fla., Tarpon Springs.—Pinellas Realty Co. will erect residences.

Ga., Atlanta.—H. H. Clark will erect 8-room residence; day labor; cost \$3250.

Ga., Atlanta.—John B. Whitman is having plans prepared by Hentz & Reid, Candler Bldg., Atlanta, for residence in Peachtree Heights Park.

Ga., Atlanta.—W. E. Burt will erect 2 residences; day labor; cost \$5500.

Ga., Atlanta.—Dillon-Morris Co. will erect 2 dwellings; 1 and 2 stories; frame; stone foundation; furnace heat; cost \$5700; Lella Ross Wilburn, Archt., 305 Peters Bldg., Atlanta.

Ga., Atlanta.—Feld Realty Co. will erect 2 bungalows; hardwood floors; furnace heat; cost \$3500 each; A. F. N. Everett, Archt., 508 Grand Bldg., Atlanta.

Ga., Atlanta.—H. C. McKenzie will erect residence; cost \$6700; day labor.

Ga., Atlanta.—J. L. Dickey will erect residence; frame; colonial style; cost \$20,000; Hentz & Reid, Archts., 933 Candler Bldg., Atlanta.

Ga., Atlanta.—Monie Ferst and H. M. Strauss, 620 Forsyth Bldg., will erect residence; hollow tile; tile roof; Spanish style; furnace heat; cost \$3000; Harry E. Lindley, Archt., 617 Peters Bldg., Atlanta.

Ga., Atlanta.—Mrs. H. H. Clarke will erect bungalow; 1½ stories; 9 rooms; stone foundation; cost \$3500; Lella Ross Wilburn, Archt., 305 Peters Bldg., Atlanta.

Ga., Atlanta.—W. A. Hollingsworth will erect residence; 1½ stories; frame; steam heat; hardwood floors; cost \$3500 to \$4000; A. F. N. Everett, Archt., 508 Grand Bldg., Atlanta.

Ga., Cordele.—J. M. Diffe has plans by Hupp & Shelvorton, Fourth National Bank Bldg., Macon, Ga., for residence; 2 stories; frame; 10 rooms; cypress shingles; cost \$7000.

Ga., Cordele.—D. Holmes will erect residence; plans in progress.

Ga., Decatur.—P. L. Weekes will erect residence; 1½ stories; brick veneer; stone foundation; terrazzo and tile floors; slate roof; leaded glass; vapor heat; cost \$6500; day labor.

Ky., Harrison.—Log Mountain Coal Co. is reported to erect 50 three and four-room tenements.

Ky., Kettle Island.—Pioneer Coal Co. will erect commissary and about 30 houses.

Ky., Lexington.—E. A. Ford, 201 E. Maxwell St., will expend \$4000 to erect residence; 2½x30 ft.; ordinary construction; shingle roof; gas heat; plans and construction by owner. (Lately noted to erect 2 dwellings.)

Ky., Louisville.—M. J. Murphy Building Co. will erect 10 brick and tile dwellings on Sutcliffe Ave.; cost \$28,000.

Ky., Louisville.—W. F. Zopff will erect frame dwelling at 737 Cecil St.; cost \$3000.

Ky., Louisville.—Sanford Vaughn, Jr., will erect brick-veneer dwelling at 1936 Ivanhoe Ct.; cost \$3000.

Ky., Louisville.—H. L. Fleming will erect brick veneer dwelling at 3169 3d St.; cost \$3000.

Ky., Salyersville.—John H. Gardner will rebuild residence; 10 rooms; 2 stories; ordinary construction; metal roof; natural-gas heat and lighting; architect not decided; construction in about 2 months; lately reported burned. (See Machinery Wanted.)

La., New Orleans.—J. A. Lafaye, Jr., will erect frame residence; cost \$4000.

La., New Orleans.—Soniat Avenue Christian Church will erect church and parsonage. (See Churches.)

La., New Orleans.—W. R. Gilbert will erect two 1-story frame-and-stucco residences; cost \$8000.

La., New Orleans.—H. Fernandez will erect 1-story residence at 6131 Catina St.; cost \$3300.

La., New Orleans.—A. M. Moffitt will erect 2-story frame residence at 1635-39 Valence St.; cost \$7500.

Md., Baltimore.—John Cook, 3304 Eastern Ave., will erect 10 or 12 two-story dwellings on Eastern Ave.

Md., Baltimore.—Acme Building Co. will erect 8 dwellings on Edmondson Ave. and 18th St.; 2 stories; brick; 14x46 ft.; cost \$12,500; H. J. Tinley, Archt., 312 N. Charles St., Baltimore.

Md., Baltimore.—Provident Realty Corp., Garrison and Piedmont Aves., has plans by H. J. Tinley, 312 N. Charles St., Baltimore, for cottage at Bateman and Elsinor Aves.; 2½ stories; frame; cost \$4500.

Md., Baltimore.—New Era Realty Co. (Israel Silberstein and others), 812 Equitable Bldg., acquired tract on Erdman Ave., Clifton Park and Belair Rd., and will probably expend about \$500,000 for improvements, including erection of about 150 two-story residences.

Md., Baltimore.—John T. Donohue, Eastern Ave. and 13th St., has plans by M. R. Stone, Edmondson Ave., Baltimore, for 25 dwellings at 700-28 S. Decker St.; 2 stories; brick; 12x43 ft.; cost \$25,000.

Md., Baltimore.—Jos. L. White Realty Co., 2909 E. Monument St., will erect 20 dwellings in 2900 McElderry St.; 2 stories; brick; 14x15 ft.; cost \$24,000; C. Broring, Archt., 9 N. Potomac St., Baltimore. (Previously noted.)

Md., Baltimore.—Francis E. Yewell, 501 Title Bldg., has plans by John R. Forsythe, 224 St. Paul St., Baltimore, for 3 dwellings on Fairview Ave.; 2 stories; 30x41 ft.; slate roofs; hot-water heat; cost \$12,000; construction by owner.

Md., Baltimore.—J. R. Van Zandt, Woodland Ave. near Pimlico Blvd., has plans by John R. Forsythe, 224 St. Paul St., Baltimore, for bungalow at Carroll Rd. and Wirt Ave.; brick; 7 rooms.

Md., Baltimore.—J. S. Downing, Rose Hill Terrace, York Rd., Baltimore, acquired portion of Guilford property on York Rd. and will expend \$250,000 to \$270,000 for development; erect 12 dwellings; 2½x35 ft.; 3 stories; brick; stone foundation; slate roof; hot-water heat; gas and electric lighting; cost \$50,000; plans and construction by owner; construction about Apr. 27.

Md., Cockeysville.—Bosley, Epworth and Jessop Methodist Episcopal churches will erect parsonage on Epworth Church property; Beaver Dam marble; Dr. J. Edward Benson, Geo. C. Duncan and others, building committee.

Miss., Ramsay Springs (not a postoffice).—Ramsay Mineral Springs Co. organized by G. A. McHenry, McHenry, Miss., and Geo. R. Burton, Talladega, Ala., will erect 12 bungalows, etc. (See Hotels.)

Mo., Kansas City.—T. L. Bowles of Bowles Live Stock Co. is reported to erect residence.

Mo., St. Louis.—F. Wehrle Investment & Construction Co. will erect 6 bungalows on Kings Highway S. E.

Mo., St. Louis.—Wm. A. Giraldd, John H. Farish and others are reported to erect 6 dwellings in Hillcrest and 5 additional ones later.

Mo., St. Louis.—J. Chas. Mueller, 3500 Herbert St., has plans by Nolte & Nauman, St. Louis, for 4 bungalows; 26x47 ft.; tar and gravel roof; hot-air heat; electric lighting; cost \$2600 each; construction by owner. (Lately noted.)

Mo., St. Louis.—Henry Dischneider, 5879 Julian Ave., will erect 2 dwellings; 28x36 ft.; cost \$5000; mill construction; slate roof; hot-water heat to cost \$380; electric lighting; granitoid sidewalks; plans and construction by owner. (Lately noted.)

Mo., University Sta., St. Louis.—Leigh Bros. Real Estate & Investment Co. will erect brick dwelling in Parkview; 30x33 ft.; cost \$6000.

N. C., Black Mountain.—Dr. W. C. Hous-ton, Concord, N. C., will erect residence.

N. C., Charlotte.—Jos. Russell Ross is having plans prepared for residence; cost \$8000.

N. C., Elizabeth City.—W. L. Cohoon has plans by Benton & Moore, Wilson, N. C., for Colonial residence; slate roof; hot-air heat; cost \$19,000.

Okla., Tulsa.—D. B. Ellis will erect 2-story frame residence at 1611 Carson Ave.; cost \$4500.

S. C., Anderson.—E. R. Horton will erect 4 or 5 residences on Rose Hill.

Tenn., Memphis.—A. Y. Allen will erect 1 story frame and stucco residence; cost \$4300.

Tenn., Memphis.—G. W. Ransom will erect 2-story frame residence at 1133 N. Parkway; cost \$5250.

Tenn., Chattanooga.—O. L. Bunn, Secy. of Manufacturers' Assn., is having plans prepared by W. H. Sears, Chattanooga, for 8-room brick residence on Vine St.

Tenn., Nashville.—J. M. Robinson will erect brick stable and remodel residence; cost \$3900.

Tenn., Nashville.—J. L. Dismukes will remodel residence at 1702 West End Ave. for 3-story apartment-house; cost \$10,000.

Tex., Alvin.—J. K. Purifoy will erect residence.

Tex., Canadian.—J. F. Johnson has plans for residence to cost \$12,500.

Tex., Dallas.—Dr. L. G. Scott will erect residence in Munger Place.

Tex., Dallas.—D. P. Woodward will erect residence in Munger Place.

Tex., Dallas.—Henry D. Lindsey will erect residence in Munger Place.

Tex., Dallas.—Herbert M. Hughes will erect residence in Munger Place.

Tex., Dallas.—J. Dabney Day will erect residence in Munger Place.

Tex., Dallas.—Thos. B. Love will erect residence in Munger Place.

Tex., Dallas.—Wm. B. Breg will erect residence in Munger Place.

Tex., El Paso.—I. B. Walker will erect 3 residences.

Tex., El Paso.—Geo. W. Sharp will erect brick and cobblestone bungalow; cost \$3900.

Tex., El Paso.—Otto P. Kroeger will erect 2 dwellings. (See Theaters.)

Tex., Fort Worth.—H. I. Pineus will erect 8-room brick residence at 2104 Lipscomb St.; cost \$4000.

Tex., Fort Worth.—J. L. Stuckart will erect 2-story frame residence at 2107 Alston Ave.; cost \$4900.

Tex., Houston.—H. L. Shaifer will erect residence at Oak and Parker Sts.; 2 stories; 8 rooms; cement block foundation.

Tex., Mound.—Mound Baptist Church, Rev. Thos. B. Ramsey, is reported to rebuild parsonage reported burned.

Tex., San Antonio.—D. G. Valdez has plans by James F. Marshall for 10-room residence; hard-pressed buff brick and terra-cotta trimmings; interior finishings in mission style; two bathrooms with tiled floors and wainscoting.

Tex., Waco.—Chas. L. Sawyer has plans by Roy E. Lane, Waco, for residence at Washington and 19th Sts.; 48x70 ft.; stucco; hot-air heat; cost \$15,000.

Tex., Waco.—Roy E. Lane is preparing plans for residence on Colcord Ave.; 36x52 ft.; frame and stucco; cost \$9800; bids opened about May 1.

Va., Lynchburg.—Dr. A. W. Terrell has plans by W. R. Burnham, Lynchburg, to rebuild dwelling; 8 rooms; semi-fireproof; hollow tile; use present heating plant; cost \$6000; date of opening bids not set. (Lately reported burned.)

Va., Norfolk.—Isaac T. Walke opened bids to erect residence; brick and frame; 80x40 ft.; R. M. Price is lowest bidder; Ferguson, Calrow & Taylor, Archt., Norfolk. (Lately noted.)

Va., Norfolk.—W. H. Lesner has plans by W. T. Zepp, Norfolk, for residence at 36th St. and Villa Circle; bids opened Apr. 22.

Va., Richmond.—Annie B. Redman will erect store and dwelling. (See Stores.)

Va., Richmond.—Joseph A. and May A. Mayo will erect 2-story brick dwelling on Auburn Ave.

Va., Roanoke.—S. A. Duerson will erect two 2-story frame dwellings in Belmont Addition; cost \$3600.

Va., Roanoke.—Hamilton Terrace Co., B. L. Partlow, Pres., Box 507, will erect 30 to 50 dwellings; cost \$40,000; construction by company's force. (See Land Developments.)

Va., Salem.—J. E. Poteet will erect dwelling on Broad St.; 34x38 ft.; metal roof; hot-

water heat; electric lighting; cost \$3000; construction about last of May. (Lately noted.)

Va., Simeon.—St. Luke's Chapel is reported to erect parsonage. Address The Pastor.

W. Va., Huntington.—H. O. Boette will erect 8-room brick residence on 13th Ave.; cost \$5000.

W. Va., Huntington.—Jeff Withers will erect 8-room brick residence on 10th Ave.; cost \$3000.

W. Va., Huntington.—Geo. Harrold will erect residence on 11th Ave.; 8 rooms; brick; cost \$2500.

W. Va., Huntington.—G. T. Davis will erect 4 dwellings on 9th Ave.; 6 rooms; frame; cost \$8000.

Tex., Houston.—R. K. Greenwood, 1602 Congress Ave., will erect dwelling; 2 stories; 8 rooms; frame; wood shingle roof; cost \$4000 to \$5000; construction in May.

Va., Abingdon.—J. H. Hassinger, Kona-rock, Va., has plans by Clarence B. Kearfott, Bristol, Va.-Tenn., for several bungalows; frame construction; metal roof; pine finish; brick foundation; hot-water heat; electric wiring.

Va., Bristol.—S. A. Snyder has plans by Clarence B. Kearfott, Bristol, for dwelling; 2 stories; brick veneer; metal roof; wood porch columns; hardwood finish; frame construction; metal roof; hot-water heat; electric wiring.

Va., Darbyville.—Darbyville Coal Co. (C. H. Thompson and others) is reported to erect 10 dwellings.

Va., Petersburg.—Harvey Seward opens bids about May 1 to erect residence; cost (without mechanical equipment) \$35,000; ordinary construction; slate roof; hot-water heat to cost \$2000; Carneal & Johnston, Archts., Richmond, Va. (Lately noted to open bids in April.)

Va., Richmond.—Eppa Hunton is reported to erect residence at 810 W. Franklin St.; 3 stories, basement and roof garden; brick and stone; stone work to cost \$13,000; 35x112 ft.; vacuum cleaning and cold-storage plants; garage in rear; elevator; total cost \$50,000; Noland & Baskerville, Archts., Richmond.

W. Va., Warwood.—Mr. Clark, Hess Ave., let contract to Henry Kirchner, Jr., Warwood, to erect residence on Vance Ave.

W. Va., Wellsburg.—Jasper Potts receives bids until April 24 to erect residences; plans and specifications at store of Jasper Potts, Charles St., Wellsburg, and M. F. Giesey, Archt., German Bank Bldg., Wheeling W. Va.; two stories; 30x40 ft.; slate roof; hot-air heat; cost \$12,000.

W. Va., Wheeling.—F. C. Schwertfeger will erect residence on S. Wabash St.; cost \$3500.

GOVERNMENT AND STATE

Miss., Gulfport.—Hospital.—T. M. Kemp, Secy, Board of Directors Beauvoir Soldiers' Home, Beauvoir, receives bids until May 2 to erect 6-room addition to hospital building; plans and specifications on application.

Miss., Jackson.—Hospital.—Trustees of Mississippi Insane Hospital selected R. H. Hunt, Chattanooga, to prepare plans for annex to hospital; have \$60,000 appropriation.

N. C., Rocky Mount.—Postoffice.—Treasury Dept., Oscar Wenderoth, Supvr. Archt., Washington, D. C.—Bids May 29 to construct complete (including mechanical equipment, lighting fixtures and approaches) U. S. postoffice; 2 stories and basement; ground area 4700 sq. ft.; stone and brick facing; composition roof; drawings and specifications obtainable on application to custodian at site and at this office at discretion of Supvr. Archt.

N. C., Tarboro.—Postoffice.—Treasury Dept., Oscar Wenderoth, Supervising Archt., Washington, D. C., opened bids to erect postoffice; R. P. Farnsworth & Co., Owensboro, Ky., are lowest bidders at \$49,238 for limestone and \$51,238 for sandstone construction; 2 stories and basement; 4100 sq. ft. ground area; first floor fireproof; stone facing; tin roof. (Lately noted.)

Tenn., Pulaski.—Postoffice.—Treasury Dept., Oscar Wenderoth, Supervising Archt., Washington, D. C., receives bids until May 27 to erect postoffice; one story and basement; stone, terra-cotta and brick facing; 3700 sq. ft. ground area; non-fireproof; tin and composition roof; plans and specifications from custodian at Pulaski and Mr. Wenderoth.

HOTELS

Ala., Sylacauga.—A. L. Porter will erect hotel to replace burned Exchange Hotel.

Fla., Fort Pierce.—C. M. Horton, F. G. McMullen and others are committee to so-

lift stock for organization of Fort Pierce Hotel Co. to erect \$100,000 hotel; considering tentative plans by W. B. Camp, Jacksonville, Fla.

Fla., Orlando.—San Juan Hotel Co. will improve building; install telephones, add bathrooms, sample room, laundry, cafe and lunch room; cost \$25,000.

Fla., Orlando.—Orlando Hotel, It is reported, will erect addition.

Fla., Zolfo.—Zolfo Springs Co. is reported to expend \$50,000 to erect hotel and otherwise improve company's property.

Fla., Tampa.—William Le Duc is reported to erect hotel at Lafayette and Tampa Sts., of which J. L. Tellavast will be manager; is having plans prepared by Bonfoey & Elliott, Tampa, for 6 or 7-story structure; 105x97 ft.; reinforced concrete, brick and terracotta; corridor 27 ft. wide, lighted by skylights and ventilators; elevators; stores on ground floor; 130 bedrooms with tub and shower baths; construction by June 1. (Mr. Tellavast lately noted to erect hotel at this location.)

Fla., St. Petersburg.—S. Lund, Prop. Huntington Hotel, is reported to erect addition of rooms.

Ga., Fort Valley.—G. D. Hartley will improve interior of Harris House; install steam heat, private baths, metal ceiling in lobby, tile floor, etc.; cost about \$10,000; Hupp & Shelverton, Architects, Fourth National Bank Bldg., Macon, Ga.

Ky., Hazard.—D. Y. Combs will erect 4-story hotel.

Ky., Taylorsville.—J. R. Williamson and C. B. Gilman, both of Lexington, Ky., are reported to erect \$40,000 hotel.

Md., Baltimore.—Hugh Reilly, Prop. of Reilly's Hotel, 410 W. Franklin St., Baltimore, will improve hotel lately burned; Jno. K. Stack, Archt., 12 E. Lexington St., Baltimore.

Miss., Ramsay Springs (not a postoffice).—Ramsay Mineral Springs Co., with \$20,000 capital, organized by G. A. McHenry of McHenry, Miss., and Geo. R. Burton, Talladega, Ala.; will raze The Majestic at McHenry, remove to Ramsay Springs and rebuild, erect 12 bungalows, construct electric plant for light and power for fans and ice machinery for hotel.

N. C., Asheville.—Jno. J. O'Donnell is reported to have acquired Bloomer Block, consisting of Monarch Hotel, several stores and vacant lot; will improve present structure and erect addition to hotel.

N. C., Gastonia.—T. L. Craig is having plans prepared by A. Ten Eyck Brown, Forsyth Bldg., Atlanta, Ga., and L. D. Proffitt, Spartanburg, S. C., for hotel on Main St.; 6 stories; roof garden; 4 stores on ground floor; assembly hall; 100x135 ft.; fireproof; reinforced concrete construction; gravel roof; low-pressure steam heat; electric lighting; prism lights; 2 electric elevators to cost \$5,000 and \$6,000 each; bids opened about June 1.

N. C., Maxton.—J. P. Wiggins, owner of Maple Shade Inn, is having plans prepared by Jas. M. Russell, Lumberton, N. C., for addition and improvements; 40 additional bedrooms; hot water heating plant. (Lately noted.)

N. C., Raleigh.—Griner Realty Co. opens bids about May 5 to erect addition to Yarbrough House; 54x152 ft.; cost (without mechanical equipment) \$10,000; ordinary construction; composition roof; heating plant to be extension of present plant; Frank K. Thomson, Archt., Raleigh. (Lately noted.)

N. C., Winston-Salem.—J. S. Zimmerman, Winston-Salem, is preparing plans for hotel at Fort Fisher Beach; Spanish style; 300 rooms.

Okla., Ardmore.—Chas. Fraley is reported contemplating erection of hotel at Broadway and A St. N. E.; cost \$100,000.

Tenn., Trezevant.—J. E. Campbell, Humboldt, Tenn., will erect brick hotel to replace Trezevant Hotel; completion by June.

Tex., Fort Worth.—Scott estate will expend \$4000 to repair Metropolitan Hotel at 9th and Main Sts.

Tex., Terrell.—Hotel Artesia will erect 20-room brick addition to its present building on E. Moore Ave.

Tex., Waco.—W. T. Watt will expend \$400,000 to erect store, hotel and office building; 200x165 ft.; to contain 13 stores; 100 offices and 200 hotel-rooms; basement to contain Turkish baths, 2 in. connection with artesian well, 2000 ft. deep; concrete construction; roofing not decided; electric lighting; 6 elevators; Milton W. Scott & Co., Architects, Waco; contract let in about 60 days; lately noted. (See Machinery Wanted.)

Va., Suffolk.—C. S. Butler, Mgr. Eureka

Cafe, is reported organizing company to erect hotel at Franklin and Washington Sts.; 4 stories; 50 bedrooms; cost \$50,000.

Va., Winchester.—Mrs. O. J. Jack, Hotel Evans, is reported to erect hotel adjoining Shenandoah Valley National Bank and to convert 2 upper floors of bank into hotel rooms.

MISCELLANEOUS

Fla., Daytona.—Clubhouse.—Palmetto Club will remodel clubhouse.

Fla., Miami.—Clubhouse.—South Florida Investment Co. is reported interested in organization of club and erection of \$5000 clubhouse at Coco Plum Beach.

Fla., Orlando.—Public Building.—City and Board of Trade will erect building. (See City and County.)

Ga., Atlanta.—Parish House.—Colored Episcopal Church will erect church and parish house. (See Churches.)

Ga., Atlanta.—Clubhouse.—Atlanta Athletic Club will have plans prepared by Hentz & Reid, Candler Bldg., Atlanta, for clubhouse at East Lake; steam heat; electric lights.

Ga., Columbus.—Pavilion.—Columbus R. R. R. M. Harding, Gen. Supt., will, it is reported, erect pavilion at Wildwood Park to replace burned structure; dancing floor, 40x65 ft.

Ga., Macon.—Clubhouse.—Harry S. Edwards and others are having plans prepared by Nisbet & Brown, 612 Grand Bldg., for clubhouse to be erected at Holly Bluff; frame; cost \$4000; day labor.

La., Baton Rouge.—Home.—Manse Circle, Presbyterian church, has plans by G. K. Young, 414 Pike St., Baton Rouge for Old Ladies' Home; 10 rooms; cost \$3000; metal shingle roof; stoves; construction about July 1; address proposals to Mrs. Ed. McGilveran, 642 Union St., Baton Rouge. (Lately noted.)

La., New Orleans.—Home.—Jno. M. Bonner Memorial Home, 801 Hennen Bldg., will erect home for aged men; plans not made.

La., New Orleans.—Hospital.—French Hospital has plans by Paul Andry, New Orleans, for addition to hospital; 2 stories; accommodations for 12 beds; clinic room, waiting-room, etc.

Tenn., Chattanooga.—Parish House.—St. Paul's Episcopal Church, Rev. Loring Clark, Rector, will erect parish house to cost \$25,000 to \$30,000.

Tenn., Memphis.—Restaurant.—G. M. Shaw, Tennessee Trust Bldg., Memphis, is supervising architect for improvements to building at 11 S. Main St. for Thompson Restaurant; plans call for terra-cotta front; ground floor finished in marble and tile; mosaic floor; fourth floor for kitchen and bake shop; cost \$15,000.

Tenn., Nashville.—Stable.—J. M. Robinson will erect stable, etc. (See Dwellings.)

Tex., Palacios.—Library.—Ladies' Library Assn. is reported promoting erection of library.

Va., Leesburg.—Hospital.—Drs. Jno. Gibson, Clayton Orr and others, directors of Loudon Hospital, will erect hospital.

W. Va., Wheeling.—Dancing Pavilion.—Alex. Campbell and J. D. Meredith are reported to erect dancing pavilion at Belle Isle beach; 2 stories; lower floor for dressing-rooms, lockers and shower baths; upper floor for dance hall; cost \$10,000.

RAILWAY STATIONS, SHEDS, ETC.

Ga., Greensboro.—Georgia R. R., C. A. Wickersham, Gen. Mgr., Augusta, will improve depot.

Ga., Lawrenceville.—Seaboard Air Line Ry., W. D. Faucette, Ch. Engr., Norfolk, Va., is reported to erect passenger station; brick; electric lights; cost about \$10,000.

Ga., Rockmart.—Southern Ry., B. Herman, Chief Engr., 1300 Pennsylvania Ave. N. W., Washington, D. C., will erect passenger station; cost about \$10,000.

N. C., Apex.—Durham & Southern Ry., J. E. Stagg, V. P., Durham, and Seaboard Air Line Ry., W. D. Faucette, Chief Engr., Norfolk, Va., are reported to erect freight and passenger station to cost about \$22,000.

Okla., Oklahoma City.—Chicago, Rock Island & Pacific Ry., C. A. Morse, Chief Engr., Chicago, and St. Louis & San Francisco Ry., V. K. Hendricks, Chief Engr., St. Louis, are reported to erect union station.

Tenn., Lebanon.—Nashville, Chattanooga & St. Louis Ry., H. McDonald, Ch. Engr., Nashville, Tenn., is reported to erect depot; concrete and stone; cost \$12,000.

Tex., Beaumont.—Southern Pacific Co., W. G. Van Vleck, Mgr. Texas Lines, Houston,

Tex., is reported to erect train sheds to cost about \$10,000.

Tex., Dallas.—Union Terminal Co., Murrell L. Buckner, Secy.; C. H. Dana, Ch. Engr., started preliminary construction on union station; main building, 282x135 ft.; Italian renaissance; portion of walls 6 ft. thick; facade with massive pillars on square columns; main waiting-room, 70x123 ft., 40 ft. to ceiling; broad stairs from main floor to waiting-rooms; loggia, 95x18 ft.; train platforms of umbrella type; covered bridge, 36x400 ft. from waiting-room to platforms; 12,000 sq. ft. in baggage-room; elevators for baggage and mail; interior of building not determined; storage yard for 150 coaches and roundhouse with 12 stalls; electric or electro-pneumatic system of signals; 10 tracks with provision for 18 to be constructed as needed; plans and specifications by Jarvis Hunt, Chicago; E. D. Griffin, superintendent of construction; contract recently let to James Stewart & Co., St. Louis, but reported this will not be executed, and new contract ready for letting in 2 or 3 weeks. (Lately noted.)

Tex., Greenville.—Eastern Texas Traction Co. will erect office building. (See Bank and Office.)

Va., Richmond.—Southern Ry. Co., B. Herman, Chief Engr., 1300 Pennsylvania Ave. N. W., Washington, D. C., will construct freight sheds and yards on site of present passenger station, erect passenger station in South Richmond, probably at 6th and Perry Sts., and make other improvements. (Lately noted to erect freight house and office building.)

SCHOOLS

Ala., Phenix.—City will erect school; cost \$7000 to \$10,000; brick; 2 stories; will receive bids. Address The Mayor.

Ark., Paragould.—Paragould Special Dist. School Board will erect 6-room brick addition to east side school and 4 additional rooms to west side school; A. M. Reedy, J. V. Landrum, Lon Tyner and E. S. Baker, Comm.

Fla., Auburndale.—School Board is having plans prepared by W. R. Biggers, Tampa, for proposed school.

Fla., Fort Lauderdale.—City is considering bond issue to erect school. Address The Mayor.

Fla., Manatee.—Manatee County School Board, Bradenton, Fla., has plans by Willis R. Biggers, Tampa, for proposed school and receives bids until May 5.

Fla., St. Petersburg.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., is erecting series of school buildings; first building 290x170 ft.; Spanish style of architecture; S. T. McClarren, Archt. (See Machinery Wanted.)

Fla., Tampa.—Mrs. Langdon Caskin and others are interested in organization of company with \$60,000 capital to establish open-air school, erect building, etc.

Ga., Americus.—City will expend \$35,000 to erect school; 16 classrooms, 1 playroom, etc.; ordinary construction; low-pressure (1 gravity pipe) heat to cost \$4000; electric wiring; A. Ten Eyck Brown, Atlanta, and L. E. Kern, Asso. Architects, Macon, Ga.; date of letting contract not determined. (Lately noted.)

Ga., Atlanta.—Fulton County Commrs. are reported to erect school in Peachtree Heights Park; brick.

Ga., Chickamauga.—City has plans by W. H. Sears, Chattanooga, for school provided for in \$15,000 bond issue recently noted voted; brick; 2 stories.

Ga., Monroe.—City voted \$19,000 bonds to erect school. Address The Mayor.

Ga., College Park.—Georgia Military College, J. C. Woodward, principal, will erect dining hall and dormitory; 3 stories; main building 138x12 ft.; wing 30x60 ft.; brick veneer; steel girders; tile, cement and wood floors; iron porch columns; tin roof; skylights; steam heating plant in basement for 5 buildings; dining hall 137x40 ft.; metal ceiling; kitchen ventilators; dumbwaiter; hand-power elevator; 30 electric lamp standards for side of plaza in front; 2 lavatories; 13 closets; 6 bathtubs; 10 shower baths; bids received by Oct. 1; Lella Ross Wilburn, Archt., 305 Peters Bldg., Atlanta, Ga.

Ga., Milledgeville.—Milledgeville Mfg. Co. is having plans prepared by Walker & Chase, 533 Candler Bldg., Atlanta, for school building to contain auditorium, boys' workshop, girls' cooking-room; brick construction; furnace heat; tar and gravel roof; cost \$12,000. (Lately noted.)

Ga., Pelham.—City voted \$30,000 bonds to include \$16,000 for school building; 4 classrooms and auditorium to seat 400; manual

training and domestic facilities; P. E. Dennis, Consult. Archt. in competition.

Ky., Cynthiana.—City will vote July 7 on \$15,000 bonds to erect school. Address The Mayor. (Lately noted.)

Ky., Louisville.—Board of Education will probably erect 12-room addition to school at 17th and Duncan Sts.

La., Melville.—School Dist. No. 5 of St. Landry parish voted tax to erect high school. Address Dist. School Trustees.

La., Vivian.—Caddo Parish School Board, Dist. No. 3, Shreveport, La., has plans by Edw. F. Neild, Shreveport, for school; 18 rooms, with auditorium to seat 600; cost (without mechanical equipment) \$40,000 to \$50,000; ordinary or mill construction; tile or asbestos roof; probably steam heat; open bids about June 1; address proposals to Chas. Norris. (Lately noted.)

Md., Towson.—County School Board acquired site on Philadelphia Rd. near Highland Ave., Highlandtown, as location for school provided for in \$500,000 bond issue to be voted on May 19.

Miss., Hickory.—City opens bids about May 15 to erect 6-room school building; ordinary construction; metal shingle roof; hot-air heat; P. J. Krouse, Archt., Meridian, Miss. (Lately noted.)

Mo., Boonville.—City sold bonds to erect schools; J. H. Felt & Co., Architects, Kansas City, in charge of construction.

Mo., California.—City voted \$30,000 bonds to erect school; Lashley M. Gray, Secy. School Board.

Mo., Esther.—Board of Education will erect 10-room brick school; bids received until Apr. 20.

N. C., Matthews.—Mecklenburg County Commrs. open bids May 4 to erect addition to school; 4 rooms and auditorium; cost \$12,000; ordinary construction; slate roof; steam heat to cost \$2000; gas lighting; Louis H. Asbury, Archt., Charlotte, N. C. (Lately noted at Charlotte, N. C.)

N. C., Burnsville.—Stanley-McCormick School, T. A. Cheesborough, Supt., will expend \$30,000 for new building, equipment and machinery. (Lately noted at Tenn., Burnsville.)

S. C., Cades.—Cades School Dist. voted \$5500 bonds for schools. Address Dist. School Trustees.

Tenn., Columbia.—City is having plans prepared by Hart & Gardner, Nashville, Tenn., for school for which \$75,000 bonds were voted. (Lately noted.)

Tenn., Jackson.—Board of Education receives bids through S. P. Anderson, Chmn. Bldg. Com. until Apr. 23 to erect addition to high school; 3 stories; brick; plans and specifications at office of R. A. Heavener, Archt., Murray Bldg., Jackson.

Tenn., New Providence.—Montgomery County Commrs. Clarksville, Tenn., are considering erecting school to replace burned structure; cost \$8000.

Tenn., Shelbyville.—Commercial Club is interested in enlarging Dixon Academy.

Tenn., Shelbyville.—Shelbyville Commercial Club is interested in improving Tate School.

Tex., Clifton.—Clifton Independent School Dist. has plans by Geo. Burnett, Waco, Tex., for school building; 65x34 ft.; 2 stories and basement; cost \$20,000; ordinary construction; asbestos roof; individual jacketed heaters; electric lighting; date of opening bids not set; address proposals to R. F. Clement, Clifton. (Lately noted.)

Tex., Big Wells.—School Trustees have plans by Adams & Adams, San Antonio, for school for which \$20,000 bonds were sold; fireproof; brick; cost \$17,000. (Lately noted.)

Tex., Cunningham.—Cunningham School Dist. voted \$5000 bonds for schools. Address Dist. School Trustees.

Tex., Dallas.—Board of Education rejected all bids to install heating system in school and erect 4-room addition to Jas. S. Horz School; deferred these improvements indefinitely. (Lately noted.)

Tex., Elkhart.—School Board, W. Neel, Pres., opens bids about May 15 to erect brick school; cost \$8500; architect not selected. (Lately noted voting \$8000 bonds.)

Tex., Tampa.—School Board, D. Collier, Secy., opens bids Apr. 27 to erect high school; 107x63 ft.; cost (without mechanical equipment) \$20,000; ordinary construction; asbestos roof; Wm. Albert Tackett, Archt., Sherman, Tex. (Lately noted to open bids about Mch. 15.)

Tex., Thorndale.—Thorndale Independent School Dist. voted \$20,000 bonds to erect school. Address Dist. School Trustees. (Lately noted.)

Va., Blacksburg.—Virginia Polytechnic In-

stitute, J. D. Eggleston, Prest., has plans and specifications ready for bidders to erect McBryde building of mechanic arts; separate bids on heating, plumbing and electrical work; previously noted. (See Foundry and Machine Shops.)

Va., Blackstone.—Blackstone Academy, E. S. Ligon, Prest., has plans by M. E. Wright to rebuild school; L shape, 154x97 ft., with 45-ft. depth; cost (without mechanical equipment) \$40,000; brick; slate roof; steam heat in detached boiler-house to cost \$3000; electric lighting; freight elevator; lately reported burned. (See Machinery Wanted.)

Va., Bristol.—City rejected all bids to erect high school and will receive new bids until Apr. 27; plans by C. B. Kearfott, Bristol, Tenn., call for structure 225x165 ft.; 2 stories and basement; brick, stone and terra-cotta; steam heat. (Lately detailed.)

Va., Charlottesville.—St. Paul's Protestant Episcopal Church will erect chapel at University of Virginia; cost \$130,000. Address The Rector.

Va., Harrisonburg.—Trustees of State Normal and Industrial School for Women, Julian A. Burruss, Prest., receive bids until Apr. 28 to erect refectory and students' building; plans and specifications at office of Chas. M. Robinson, Archt., 508-12 Times-Dispatch Bldg., Richmond.

Va., Holland.—Nansemond County Comms., Suffolk, Va., will erect school; considering sites.

Va., Pulaski.—Pulaski Dist. School Board is considering election on \$58,000 bonds to erect schools.

W. Va., Weston.—Catholic Church has plans by Albert Brotenitz for school and church building. (See Churches.)

STORES

Ala., Allenville.—Straiton Bros., Greensboro, Ala., advise they have not received contract for building for B. N. Allen, as lately reported.

Ala., Bessemer.—W. H. Lewis will erect store building; 100x125 ft.; 5 stories; reinforced concrete fireproofing and roof; small tiling; two elevators; cost \$75,000; plans by W. E. Bennis, Bessemer.

Ala., Birmingham.—Robert Jemison, Jr., is reported to erect 2 stores to replace burned structures on Third Ave.; 3 stories; brick and heavy timber; elevators.

Ala., Birmingham.—Roden estate is reported to erect building on Third Ave. to replace burned structure; 3 stories; brick and heavy timber; elevator.

Ala., Clanton.—W. J. Mullins, J. E. Johnson and others will erect brick building.

Fla., Fort Myers.—Heltman-Evans Co. will erect store building to cost \$20,000. (See Machinery Wanted.)

Fla., Fort Myers.—A. J. Moore will erect business and apartment building; lower floor for stores; upper floors, offices.

Ala., Red Bay.—Tiffin Hardware & Furniture Co. will erect building.

Fla., Dunedin.—T. T. and Rabb Zimmerman will erect store building.

Fla., Dunedin.—Whitmire & Addington will erect building; 3 stories; brick.

Fla., Miami.—Walter Waldin and others will erect building for stores, offices and theater; 1 story; 150x150 ft.; concrete; exterior stuccoed white; 7 stores, two to be 40x50 ft. and five 20x50 ft.; solid plate-glass fronts; open-air theater 100x100 ft., with concrete walls on each side, and covering for inclement weather.

Fla., Orlando.—J. L. Gurnsey will erect 4-story building to contain offices.

Fla., St. Petersburg.—Willson-Chase Co. will erect store building on Central Ave.; 5 stories; 44x100 ft.; fireproof; reinforced concrete or brick; 2 elevators; Mr. McClaren, Archt.; construction to begin June 1; cost about \$30,000.

Fla., West Tampa, Sta. Tampa.—Antonio Zedilla has plans by Willis R. Biggars to erect store building on Howard Ave.; cost \$10,000.

Ga., Atlanta.—Jas. L. Wright will erect store and apartment-house. (See Apartment-Houses.)

Ga., Griffin.—J. H. Stevens will erect brick and concrete building on Bank Al.

Ga., Griffin.—Will Hill Newton will erect 3 store buildings; brick and concrete.

Ga., Macon.—Johnson Bros. Furniture Co. has plans by Hupp & Shelverton, Macon, for store building on 3d St.; 4 stories and basement; terra-cotta front; remainder of fancy brick; 46x106 ft.; day labor; T. J. Thames in charge of construction; cost \$18,000. (See Machinery Wanted.)

Ga., Nicholls.—Bank of Nicholls will erect building. (See Bank and Office.)

Ga., Tallapoosa.—A. L. Jackson will not erect store building, as lately reported.

Ga., Tallapoosa.—Persons Bros. have plans by Park A. Dallis Co., 913 Candler Bldg., Atlanta, for store building 40x100 ft.; one story; brick; steel; plate glass; tar and gravel roof; day labor.

Ga., Tallapoosa.—J. P. Gholston, Comer, Ga., is reported to erect building to contain three stores.

Ga., Helena.—Carson & Son have plans by W. W. Simmons, McInae, Ga., to rebuild structure; 50x25 ft.; fireproof. (Lately reported burned.)

Ky., Hazard.—R. D. Baker and Wm. Pursifall are reported to erect brick building to cost \$10,000.

Ky., Horse Cave.—Smith & McGuire will remodel store front. (See Machinery Wanted.)

Ky., Kettle Island.—Pioneer Coal Co. will erect commissary and about 30 houses.

Ky., Louisville.—R. A. Robinson & Co. will expend \$3000 to alter brick building at 226 4th St.

La., Bunkie.—Avoyelles Wholesale Grocery Co. will probably erect building to replace structure reported burned at loss of \$30,000.

Md., Baltimore.—G. T. Sadtler & Sons, 14 E. Baltimore St., have plans for store building at 345 N. Charles St.; contractors estimating: J. Henry Miller, Inc., Eutaw and Franklin Sts.; Henry Smith & Sons, 7 E. German St.; Edw. Brady & Sons, 1113 Cathedral St.; John Hiltz & Sons, 7 Clay St.; Thos. L. Jones & Son, 410 W. Saratoga St.; B. F. Bennett Bldg. Co., 123 S. Howard St., all of Baltimore; bids opened Apr. 23. (Previously noted.)

Mo., Kansas City.—Chas. Weill will erect store and flat building. (See Stores.)

Mo., St. Louis.—H. W. Elliot is reported to erect building on Locust St. for National Plumbing Supply Co.; cost about \$10,000.

Mo., St. Louis.—Phillip Brenner has plans by F. Holly, St. Louis, for 2-story store and tenement-house at 6811 Gravois St.; cost \$7500; construction by owner.

Mo., Wills.—Fenton Realty Co., Caruthersville, Mo., will erect 35x100-ft. building.

N. C., Asheville.—Jno. J. O'Donnell is reported to have acquired Bloomberg Block and to improve. (See Hotels.)

N. C., Black Mountain.—J. B. Sherrill, E. F. White and Walter Thompson, all of Concord, N. C., are reported to have organized company to erect 3 stores.

N. C., Durham.—F. C. Geer is reported to erect store buildings.

N. C., Gastonia.—T. L. Craig is having plans prepared for hotel and store building. (See Hotels.)

N. C., Scotland Neck.—R. J. Madey has plans by Benton & Moore, Wilson, N. C., for store and theater building; 50x175 ft.; cost (without mechanical equipment) \$12,000; slow-burning construction; metal roof; steam heat.

N. C., Warsaw.—Niven, Price & Co. will erect store building; 2 stories; brick; 3 rooms on ground floor, each 30x30 ft.

N. C., Winston-Salem.—W. C. Tise, 114 E. 3d St., will expend \$5000 to erect store building; 100x55 ft.; metal roof; day labor. (Lately noted.)

Okla., Tulsa.—A. L. Farmer will erect 3-story brick and concrete building on 4th St.; cost \$18,000.

Okla., Tulsa.—Bagby & Thomason will erect 2-story brick building at 309 S. Boston Ave.; cost \$15,000.

Tenn., Bristol.—J. A. Caldwell has plans by Clarence B. Kearfott, Bristol, to remodel store building; 45x70 ft.; new front; plate and prism glass; steel beams; metal ceiling; new tin roof; composition.

Tenn., Nashville.—Vaulx estate and Johnson Bransford will erect store and office building. (See Bank and Office.)

Tenn., Nashville.—Goodlett Realty Co. will erect brick stores at Eighth Ave. and Commerce St.; cost \$5000.

Tenn., Waverly.—J. J. Cowen & Co. will rebuild burned structure.

Tenn., Waverly.—Mrs. J. J. Teas will rebuild burned structure.

Tenn., Waverly.—Slayden Bros. will rebuild burned structure.

Tenn., Waverly.—W. T. McCracken will rebuild 2 business structures. (Lately reported burned.)

Tex., Alvin.—W. L. Haley will erect brick building on Gordon St.

Tex., Dallas.—Fred J. Schoellkopf is reported to remodel old Elks' Bldg. at cost of \$12,000.

Tex., Dallas.—John Bookhout is reported to erect addition to building at Elm and Seclard Sts. for Texas Dry Goods Co.; 3 stories; brick; 2 passenger elevators and improvements to present structure; cost \$15,000 to \$20,000.

Tex., Fredericksburg.—D. A. and A. J. Hahne are reported considering erecting building on San Saba St.

Tex., New Braunfels.—Louis Heane Co. is reported to expend \$6000 to construct front to building; Herbert Voelcker, Archt.

Tex., San Antonio.—L. G. Denman will expend \$3000 to alter and repair building on W. Franch Pl.

Tex., San Antonio.—G. A. Duerler is reported to expend \$18,000 to improve building on W. Commerce St.; erect additional story, provide front and make interior improvements.

Tex., Terrell.—M. C. Roberts will erect brick business building on E. Moore Ave.

Tex., Waco.—W. T. Watt lets contract in about 60 days to erect store, hotel and office building to cost \$400,000; lately noted. (See Hotels.)

Tex., Waco.—Frank Kenton is reported to erect building at 3d and Jackson Sts., to be occupied by V. Kemendo Co.; red pressed brick front; 2 stories; cooling and dark rooms; electric elevators and shifts.

Va., Marion.—D. M. Smith Drug Co. abandoned plans for store building. (Clarence B. Kearfott, Bristol, Va.-Tenn., lately noted having prepared plans.)

Va., Newport News.—D. Berlin has plans by Chas. M. Robinson, Richmond, for store and office building at 23d and Jefferson Aves.; 2 stories; 50x100 ft. Address Archt.

Va., Petersburg.—Lavenstein Bros. will erect department store to replace burned structure; also reported to erect theater on Union St.

Va., Richmond.—F. P. McConnell, care of Manchester National Bank, and associates invite bids to erect store, bank, office and lodge building. (See Bank and Office.)

Va., Richmond.—Annie B. Redman will erect 2-story brick store and dwelling at Main and Meadow Sts.; cost \$4650.

W. Va., Bower.—Davis Colliery Co., Elkins, W. Va., will expend \$15,000 to erect store and office building; 35x83 ft.; porch on 3 sides; fireproof; cement or slag roof; hot-water heat; electric freight elevator; A. C. Lyons, Archt., Fairmont, W. Va.; construction by company's force; lately noted. (See Machinery Wanted.)

W. Va., Clarksburg.—S. W. Ford is preparing plans for store and office building. (See Bank and Office.)

W. Va., McMechen.—Cress & Murry are reported to erect brick building on Marshall St.

W. Va., Weston.—John Connell contemplates erecting building at 3d St. and Court Ave.; 2 stories; brick; lower floor for stores; upper floor for apartments.

W. Va., Wheeling.—Edward Wagner Wholesale Grocery Co. will erect building at 21st and Main Sts.

THEATERS

Fla., Miami.—Walter Waldin and others will erect store office and theater building. (See Stores.)

Ga., Atlanta.—Pete Mion will erect moving-picture theater on Peachtree St.; seating capacity 750; 20-ft. rotunda 30 ft. high; entrance and rotunda alone to cost \$5000; rotunda and exterior finished in rockwood tile; total cost \$25,000.

Mo., Sikeston.—Dr. E. J. Malone has plans by Marion Clark, Sikeston, for theater; 40x120 ft.; cost (without mechanical equipment) \$25,000; practically fireproof; 30-lb. tin roof; steam heat (contract not let); electric lighting; will employ foreman. (Lately noted.)

N. C., Scotland Neck.—R. J. Madey has plans for theater and store building. (See Stores.)

S. C., Columbia.—Palmetto Amusement Co.

will erect theater; Wilson & Sompayrac, Architects, Columbia.

Tex., El Paso.—Otto F. Kroeger will erect theater on Mills Map; cost \$30,000; also erect two 2-story brick residence on Mundy Heights; cost \$4000.

Va., Petersburg.—Lavenstein Bros. are reported to erect theater. (See Stores.)

WAREHOUSES

Ga., Lafayette.—Farmers' Hardware & Supply Co. organized by J. D. McConnell, W. E. Withers, J. C. Young and others; will erect warehouse.

Ga., Milledge.—Milledge Mfg. Co. will erect cotton warehouse; brick; cement floor; sprinkler system; tar and gravel roof; plans by Walker & Chase; 533 Candler Bldg., Atlanta.

Ky., Scottsville.—Joe Meredith, E. H. Read, John Grubbs and others are promoting company with \$25,000 capital to erect \$30,000 warehouse.

La., New Orleans.—Ford, Bacon & Davis, 115 Broadway, New York, state they have been engaged by Board Port Comms. to design and supervise construction cotton warehouses, with wharves, docks, terminal and accessories; plans not ready for several months; other details not ready for publication; sold \$3,000,000 bonds. (Lately noted.)

N. C., Mt. Airy.—National Furniture Co. will erect additional warehouse.

N. C., Mooresville.—Imperial Cotton Oil Co., Statesville, N. C., contemplates erection of warehouse for seed and mill products. (See Cotton Compresses and Gins.)

N. C., Walnut Cove.—Walnut Cove Warehouse Co. will erect leaf-tobacco warehouse; 80x200 ft.; mill construction; galvanized roof; electric lighting; bids opened Apr. 22; address proposals to Hutcherson & Taylor, Stoneville, N. C. (Lately described.)

N. C., Winston-Salem.—Mengel Box Co. will erect warehouse on Reynolds St.; 90x260 ft.; one story; cost \$5000.

S. C., Columbia.—D. L. B. Owens has plans by J. H. Sams, Columbia, for warehouse; 60x50 ft.; 3 stories; composition roof; electric freight elevator (purchased); day labor. (Lately noted to erect 3 buildings to cost \$12,000.)

S. C., Gaffney.—Victor Cotton Oil Co. will build 40x50-ft. fertilizer warehouse extension; contract let. (See Cotton Compresses and Gins.)

Tenn., Carthage.—Upper Cumberland Loose Leaf Warehouse Co. organized by W. R. Ford and others; will erect warehouses. (See Tenn., Gallatin.)

Tenn., Gallatin.—Upper Cumberland Loose Leaf Warehouse Co. organized with \$40,000 capital by W. B. Ford, Lee Duke of Carthage, Tenn.; W. G. Shamburger, E. L. Anderson and L. M. Ross, all of Gallatin; will erect tobacco warehouses at Gallatin and Carthage.

Tenn., Nashville.—Vaulx estate and Johnson Bransford will erect warehouse, etc. (See Bank and Office.)

Tenn., Waverly.—J. P. Cowen & Co. will erect warehouse.

Tex., Clinton.—Nelms-Kehoe Dock Co. will erect 2 warehouses, 200x250 ft., each to have capacity 5000 bales cotton. (See Cotton Compresses and Gins.)

Tex., Dallas.—McDougle, Cameron & Webster will occupy building to be erected at Lamar and Broom Sts.; 100x114 ft.; 2 stories and basement; cost \$50,000 to \$60,000.

Tex., El Paso.—J. F. Goebel will erect adobe warehouse in Bassett's addition; cost \$3000.

Tex., Fort Worth.—Iten Biscuit Co., Omaha, Neb., Clinton, Iowa, and Oklahoma City, is reported to occupy warehouse at 15th St. and Jennings Ave.; to be erected by E. C. Hoadley.

Tex., Schulenburg.—Schulenburg Oil Mill is proceeding with construction of concrete and steel 60x62-ft. warehouse. (See Cottonseed-oil Mills.)

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—John L. Warren, Southern Bldg., has plans by Hunter & Bell, Southern Bldg., Washington, for apartment-house; 97x115 ft.; 4 stories; semi-fireproof; Carey's roofing; steam heat; gas and electric lighting; cost (without mechanical equipment) \$80,000; no general contract; sub-bids let to Isadore Freund, 1315 7th St. N. W., Washington, for plumbing; Harry G. Wilson, 4004 Georgia Ave., Washington, for bricklaying; Fox & Lewis, 37 R St. N. W.,

for carpenter work and to superintend all construction. (Lately noted.)

Fla., Jacksonville.—Charlotte G. Meigs let contract to Arthur Meigs, Jacksonville, to erect six 2-story brick apartment-houses on Beaver St.; Fred. Opdike, Archt., Jacksonville; cost \$30,000.

Ga., Atlanta.—George S. Moffett awarded contract to W. P. Francis, Atlanta, to erect 3-story apartment-house; 50x123 ft.; brick; 12 apartments, 4 rooms each; cost \$32,000; plans by A. N. Canton, Candler Bldg., Atlanta.

Ga., Atlanta.—Joseph M. Franklin awarded contract to J. L. Denman, Empire Bldg., to erect 2-story frame apartment-house; two apartments; cost \$4000; plans by Fritz Wagner, 1208 Fourth National Bank Bldg., Atlanta.

Md., Baltimore.—Lombardy Apartment Co., 40th St. and Stony Run Lane, let following subcontracts for apartment-house: Price Construction Co., 225 St. Paul St., for concrete work; Baltimore Brick Co., 710 Maryland Trust Bldg., and Chas. F. Berndt, 1236 N. Broadway, brick work; Maryland Terra-Cotta Co., Wilcomico and Clare Sts., terra-cotta; Heise & Bruns Mill & Lumber Co., 600 S. Caroline St., mill and lumber; Wm. F. Hiltz, 3 Clay St., painting; Swindell Bros., Bayard and Russell Sts., glass; Patapasco Iron Works, Ostend and Wilcomico Sts., J. Harry Rymer, 40 W. Oliver St., all of Baltimore; John F. Kunkel, 413 King St., Baltimore (lately noted), to supervise construction Clyde N. Friz, Munsey Bldg., Archt., Baltimore.

Md., Baltimore.—J. A. and C. Richardson let contract to J. S. Moke, 1825 W. Baltimore St., Baltimore, to erect addition to apartment-house at 228 W. Lafayette Ave.; 3 stories; ordinary construction; tin roof; steam or hot-water heat; electric lighting; dumb-waiter; cost \$5000; Mottu & White, Archts., 322 N. Charles St., Baltimore.

Md., Baltimore.—Joshua Levering, Lake Station, Md., let contract to John F. Kunkle, 29 S. Linwood Ave., Baltimore, to remodel residence at 1316 Eutaw Pl. for apartment-house; 26 ft. 6 in. by 27 ft. 2 in.; cost \$15,000; ordinary construction; first floor fireproof; slag and tin roof; hot-water heat; electric lighting; cement sidewalks; Edw. H. Glidden, Archt., Maryland Casualty Tower Bldg., Baltimore.

Md., Hagerstown.—Maryland Real Estate Co., C. C. Easton, Secy., will probably let contract to C. A. Langley, 310 12th St. N. W., Washington, D. C., to erect apartment-house; 49x157 ft.; cost (without mechanical equipment) \$100,000; fireproof; slag roof; steam heat; elevator to cost \$3500; Mack & Kountz, Archts., Negley Bldg., Hagerstown; excavation under separate contract. (Lately noted.)

Mo., St. Louis.—P. R. Pollard, 3648 Bamberger Ave., has plans by and let contract to Leo K. Milberger, St. Louis, to erect tenement-house; 23x55 ft.; mill construction; furnace heat to cost \$250; electric lighting; cost \$5000. (Lately noted.)

Okla., Tulsa.—S. Gallais is reported to have plans by and let contract to A. Wasielewski, 4th and Elgin Sts., Tulsa, for 3 apartment buildings; 44x75 ft.; 3 stories; steam heat; laundries; vacuum cleaners; each suite to contain 7 rooms and outdoor sleeping porches.

Tenn., Chattanooga.—Realty Trust Co. let contract to erect office and apartment building. (See Bank and Office.)

Tenn., Chattanooga.—Dr. I. R. Stone let contract to Chambers & Son, Chattanooga, to erect apartment-house on E. 5th St.; 3 stories; fancy mat-finished brick walls; 3 suites; cost \$10,000; W. H. Sears, Archt., Chattanooga.

Tenn., Knoxville.—L. D. Tyson let contract to erect apartment and store building; 2 stories and basement; 60x140 ft.; lately noted. (See Stores.)

Tex., Dallas.—Dr. John Neel let contract to E. P. Edmondson to erect apartment-house; 2 stories; 22 rooms; cost \$11,500; C. W. Bulger & Son, Archt., Dallas.

Tex., El Paso.—W. E. Lambert let contract to Perry-Kirkpatrick Co., El Paso, to erect apartment-house at 1530 Upson St.; brick; steam heat; cost \$20,000.

Va., Norfolk.—R. F. Hogue, Petersburg, Va., will expend \$30,000 to erect apartment-house; 100x80 ft.; mill construction; gravel roof; steam heat; electric lighting; contract (lately noted) let to Vega & Richardson, 340 Withers Bldg., Norfolk.

Va., Richmond.—L. R. Smith and R. M. Anderson let contract to R. M. Anderson, Richmond, to erect 2-story brick tenement-house on Davis Ave.; cost \$9000.

BANK AND OFFICE

Ala., Bessemer.—Bessemer National Bank will expend \$12,000 to remodel interior of bank and install 2 reinforced concrete vaults with 2 sheets of steel and time locks; marble and mahogany fixtures; 5-ft. mahogany wainscot; let contract to Mosler Safe Co., Houston, O., for vault work, and to Southern Seating & Cabinet Co., Jackson, Tenn., for fixtures.

Ala., Clanton.—Saml. E. Johnson let contract to erect office and store building. (See Stores.)

D. C., Washington.—Real Estate Trust Co.

let contract to A. B. See Elevator Co., 220 Broadway, New York, to install elevator; Milburn, Heister & Co., Archts., 710 14th St. N. W., Washington.

Fla., Fort Pierce.—Bank of Fort Pierce let contract to Snelson & Miller, Jacksonville, to erect bank building; 2 stories; 50x100 ft.; ordinary construction; Bedford stone; copper cornice; buff impervious brick; electric lighting; cost \$25,000 to \$35,000; W. B. Camp, Archt., Jacksonville. (Lately noted.)

Fla., West Tampa, Sta. Tampa.—Manuel Y. Diaz let contract to Logan Bros. to erect store and office building on Howard Ave. to cost \$15,000.

Ky., Louisville.—Bourbon Stockyards Co. will erect office building; 2 stories and basement; company wires Manufacturers Record: "Building will be 155x155 ft.; concrete, iron and brick; cost \$100,000; D. X. Murphy & Bro., Archts.; Paradis Construction Co., Gen. Contr.; F. A. Clegg & Co., steam heating contractor; all of Louisville.

Md., Baltimore.—Second National Bank let contract to D. M. Andrew Co., Mt. Vernon Ave. and 26th St., Baltimore, to alter and erect addition to bank building; A. C. Leach, Archt., 323 N. Charles St., Baltimore. (Lately noted.)

S. C., Chester.—People's Bank let contract to Love & Owens, Rock Hill, S. C., to remodel building.

Mo., St. Louis.—Rumsey estate let contract to G. Hartman Construction Co., St. Louis, to erect addition to brick office building at 712-724 N. Grand St.; cost \$9000.

N. C., Lexington.—Princess Theater, F. C. Carroll, Prop., Box 404, let contract to erect office and theater building. (See Theaters and Machinery Wanted.)

Tenn., Chattanooga.—Realty Trust Co. let contract to T. S. Moudy & Co., Chattanooga, to erect building; 9 stories; reinforced concrete frame; hollow tile interior walls; 2 elevators; lower floor for offices; upper floors for apartments; cost \$100,000; completion by Dec. 1; R. H. Hunt, Archt., Chattanooga. (Lately noted.)

Tex., Clifton.—First Guaranty State Bank let contract to H. H. Killion to remodel brick building and install marble fixtures, etc.; cost \$10,000.

Tex., Harwood.—First State Bank of Harwood, Dr. L. G. Dexter, Prest., let contract to erect bank building; Adams & Adams, Archts., San Antonio.

Va., Richmond.—I. H. Kaufman and G. K. Pollock let contract to erect store and office building. (See Stores.)

W. Va., Follansbee.—Bank of Follansbee will expend \$3500 to erect bank and office building; 25x45 ft.; 2 stories; ordinary brick construction; Carey's composition roof; hot-air heat to cost \$180; gas and electric lighting to cost \$100; Thomas & Lott, Archts., Follansbee; contract (lately noted) let to A. S. Craig, Follansbee; subcontracts include roofing, heating, plumbing, fixtures, etc.

CHURCHES

Ark., Fordyce.—Presbyterian church let contract to S. M. Apple, Little Rock, Ark., to erect building; cost \$20,000; will install pipe organ.

Fla., Fort Pierce.—Fort Pierce Presbyterian Church let contract to Snelson & Miller, Jacksonville, Fla., to erect building; main auditorium and Sunday-school constructed to combine as one room; cost \$15,000; E. E. Lewis, Archt., Miami, Fla.

N. C., Forest City.—Methodist Episcopal Church is reported to have let contract to erect building; 52x83 ft.; lecture-room, 32x28 ft.; slate roof; furnace heat; electric lights; cost \$8000; B. D. Price, Archt. (Lately noted.)

Tenn., Friendship.—Baptist Church let contract to Alken & Menzies to erect building on Main St.; cost \$3000 to \$4000.

Va., Alexandria.—Trustees of Second Baptist Church will expend \$6000 to erect building at King and Peyton Sts.; ordinary construction; metal shingle roof; steam heat; electric lighting; Jas. A. Clarke, Archt., 307 N. Columbus St., Alexandria; contract (lately noted) let to J. D. Knight, Alexandria. (See Machinery Wanted.)

CITY AND COUNTY

Ala., Talladega.—Jail.—Talladega County Commrs. let contract at \$854 to Pauly Jail Building Co., St. Louis, to remodel jail, including new flooring, plumbing system, changes in cells, etc. (Lately noted.)

Ky., Louisville.—Shelter-house.—Board of Park Commrs. let contract to H. H. Snyder Co., Louisville, to erect shelter-house in Shawnee Park, and to J. E. Gray, Louisville,

for plumbing; brick; tile roof; shower baths; cost \$6000; D. X. Murphy & Bro., Archts., Louisville.

La., Rayville.—Jail.—Richland Parish Police Jury let contract to J. W. Wright, Rayville, at \$10,971 to erect jail; 2 stories; brick; concrete; composition roof; electric lighting; Favrot & Livaudais, Archts., Perrin Bldg., New Orleans, La. (Lately noted.)

N. C., Concord.—Jail, etc.—Cabarrus County Commrs. let contract to erect courthouse addition, jail and jailer's residence. (See Courthouses.)

S. C., Andrews.—City Hall.—City let contract to B. E. Grandby & Sons, Sumter, S. C., to erect town hall; 30x60 ft.; 2 stories; brick and concrete; press-brick front; tile roof; 4 steel and concrete cells; electric lighting; cost \$305; Todd & Benson, Archts., Charleston, S. C.

Tenn., Memphis.—Stables.—City let contract to Fred B. Young & Son, 15th floor Memphis Trust Bldg., Memphis, to erect stables; cost \$5000; ordinary construction; rubberoid roofing. (Lately noted.)

Tex., Kingsville.—Hospital, etc.—Kleberg County let contract to Central Contracting Co., Houston, to erect hospital and courthouse lately noted. (See Courthouses.)

COURTHOUSES

Ga., Statesboro.—Bulloch County Commrs. let contract to Rogers-Simmons Co., McRae, Ga., to enlarge courthouse; cost about \$13,500; Hosford & Co., Archts., Eastman, Ga. (Lately noted.)

N. C., Concord.—Cabarrus County Commrs. let contract to Garrison & Campbell, Charlotte, to erect addition to courthouse, repair building and erect jail and jailer's residence; 64x72 ft. and 45x24 ft.; cost (without mechanical equipment) \$20,000; fireproof; cement and composition roof; steam heat to cost \$2000; electric lighting; electric sidewalk lights to cost \$1000; box elevator; subcontractors, E. B. Grady, plumbing and T. E. Toomey; amount of sub-contracts, \$10,000; L. A. Bellonby, Archt., Charlotte. (Lately noted.)

Tex., Kingsville.—Kleburg county let contract to Central Contracting Co., Houston, to erect courthouse and jail; former 100x100 ft.; 3 stories; hospital 50x100 ft.; 2 stories; cost (without mechanical equipment) \$125,000; fireproof; composition roof; Atlee B. Ayres, Archt., San Antonio. Address general contractor for sub-bids. (Lately reported.)

DWELLINGS

Ala., Montgomery.—O. O. Nelson let contract to Stuart-Monk Construction Co. to erect dwelling; 2 stories; 7 rooms; shingle roof; cost \$5500; Okel & Cooper, Archts., Montgomery. (Lately noted.)

Ala., Phenix.—Robert Diles let contract to Butts Lumber Co., Phenix, to erect residence.

Ala., Troy.—Claude Wright let contract to James Smyth, Troy, to erect 6-room bungalow.

Ala., Uniontown.—Mrs. Glass let contract to Stratton Bros., Greensboro, Ala., to erect dwelling; cost \$7000; Miller & Martin, Archts., Birmingham, Ala.

D. C., Washington.—A. B. Grunwell estate let contract to C. D. Collins, 719 18th St. N. W., to improve dwelling at 1515 30th St. N. W.; cost \$5000; plans by J. R. Grunwell, 1515 30th St. N. W.

D. C., Washington.—C. B. Wall let contract to Peter Fersinger, 1 N St. N. W., Washington, to erect 1½-story frame dwelling at 1433 Longfellow St. N. W.; cost \$4000; E. N. Hamilton, Archt., 944 K St. N. W., Washington.

D. C., Washington.—M. J. Brayton has plans by and let contract to M. H. Bray, Columbia Rd. N. W., to erect 2 dwellings on Madison St.; 2 stories; frame; cost \$5500.

D. C., Washington.—M. E. Moore let contract to W. Wm. Moore to erect 2-story dwelling at 731 2d St. N. E.; cost \$4000; J. L. Bunch, Archt., 926 Virginia Ave. S. W.

D. C., Washington.—Rhett Stuart let contract to C. A. Langley, 310 12th St. N. W., to erect dwelling at 1638 Connecticut Ave.; 4 stories; brick and stone; cost \$15,000; plans by Clarke Waggaman, 1124 Connecticut Ave.

D. C., Washington.—W. B. Howe let contract to Page Construction Co., 723 15th St. N. W., to remodel dwelling at 1821 H St. N. W.; cost \$10,500; plans by W. B. Wood, 816 Connecticut Ave. N. W.

D. C., Washington.—S. L. Phillips let contract to H. Schaffert, 330 John Marshall Pl. N. W., to erect 3 two-story brick dwellings at 1346-50 Massachusetts Ave. S. E.; cost \$3000; plans by W. E. House.

Fla., Jacksonville.—L. A. Raulersen let contract to R. B. Paramore, Jacksonville, to erect two 2-story frame residences on Johnson St.; cost \$4000.

Fla., Seabreeze.—E. R. Dusenbery, Rochester, N. Y., let contract to L. Z. Burdick, Seabreeze, to erect residence on Glenview Blvd.

Fla., Seabreeze.—George L. Johnson, Princess Isena Hotel, let contract to D. F. Faquay for 2-story 9-room residence on Peninsular Drive.

Ga., Atlanta.—A. V. Gude, Jr., let contract to Gude & Co., Atlanta, to erect two 2-story residences; ordinary frame construction; hot-air heat; electric lighting; cost \$6000 each; John C. Battle, Archt., Atlanta.

Ga., Tifton.—C. F. Cagle and W. A. Melhan, both of Atlanta, have contract to erect two 6-room bungalows; lower portion brick veneer; upper portion cypress shingles; cost \$3000.

Md., Baltimore.—J. Harry Williams let contract to Gladfelter & Chambers, 2074 Woodberry Ave., Baltimore, to erect residence on St. Martin's Rd., Guilford; 2½ stories; stucco and brick; 39.10x37.10 ft.; one-story garage in rear, 14x20 ft.; cost \$16,000; Edw. L. Palmer, Jr., 408 Roland Ave., Roland Park, Md.

Md., Baltimore.—G. Edwin Dowell, 17-19 W. Baltimore St., let contract to E. G. Turner, Bateman Ave., Baltimore, to erect residence at Guilford; 2½ stories; 44x32 ft.; brick; cost \$12,000; Edw. L. Palmer, Jr., 408 Roland Ave., Roland Park, Md. (Previously noted.)

Md., Baltimore.—Waltman T. Willey let contract to Gladfelter & Chambers, 2074 Woodberry Ave., Baltimore, to erect dwelling at Guilford; 2½ stories; stone and frame; 74x33.8 ft.; cost \$17,000; Edw. L. Palmer, Jr., Archt., 408 Roland Ave., Roland Park, Md.

Md., Kennedyville.—Kennedyville Presbyterian Church let contract to erect manse. Address The Pastor.

Mo., St. Louis.—F. Heidemann let contract to erect store and dwelling. (See Stores.)

Mo., University, Sta. St. Louis.—Chauncey V. Galloway let contract to J. E. Earenficht, Kirkwood, Mo., to erect brick dwelling; cost \$5000; O. C. Traber, Archt.

Mo., Webster Groves.—Arthur Anderson let contract to W. N. Rombough, Webster Groves, to erect frame dwelling; cost \$3800.

N. C., Winston-Salem.—T. J. Thornton let contract to J. L. Crouse, Winston-Salem, to erect residence on 1st St.; 2 stories; frame; 10 rooms; shingle roof; cost \$7000.

Tenn., Knoxville.—J. H. Anderson let contract to Thomas & Turner, Knoxville, to erect residence in Circle Park; ordinary construction; tile roof; steam heat; electric lighting; cost \$16,000. (Lately noted.)

Tenn., Memphis.—P. Nardini let contract to J. Y. Callihan to improve residence at 606 Marshall Ave.; cost \$3500.

Tenn., Memphis.—W. L. Vesey let contract to R. M. Ferguson to erect residence at 230 S. Evergreen St.; cost \$3000.

Tenn., Memphis.—Mrs. G. Michels let contract to F. C. Storey, Memphis, to erect brick-veneer residence at 23 S. Evergreen St.; cost \$4000.

Tenn., Memphis.—S. R. Martin let contract to F. C. Storey, Memphis, to erect stone-veneer residence at 1261 Lamar Ave.; cost \$4000.

Tex., Chapel Hill.—J. J. Shaver let contract to J. B. Heartfield, Brenham, Tex., to erect residence; cost \$5000.

Tex., Chapel Hill.—J. J. Shaver let contract to J. B. Heartfield, Chapel Hill, to erect dwelling; ordinary construction; shingle roof; acetylene lighting; cost \$6000; M. M. Ginn, Archt., Brenham, Tex.; lately noted. (See Machinery Wanted.)

Tex., El Paso.—Geo. E. Cairns let contract to J. E. Bischoff to erect bungalow.

Tex., Fredericksburg.—Louis Preiss let contract to erect 2-story brick residence on San Saba St.; cost \$15,000.

Tex., Fredericksburg.—Fredericksburg Land Co. is reported to have closed contract with Fredericksburg Development Co. for erection of 40 dwellings in South Heights; cost \$1200 to \$2500 each.

Va., Elk Garden.—Dale Stuart let contract to R. A. Wilson, Bristol, Va., to erect residence; cost \$14,000; T. S. Brown, Archt.

Va., Lynchburg.—Rivermont Realty Co. let contract to W. K. Barger, Lynchburg, to erect residence on Boston Ave.; frame and shingles; 7 rooms; cost \$5000.

Va., Norfolk.—L. P. Roberts let contract to B. L. Nicholson, Norfolk, to erect 2 frame residences on Redgate Ave.; cost \$3300.

Va., Richmond.—Mrs. Edith Lathrop let contract to Geo. D. Priddy, Richmond, to erect residence at 1317 West Ave.; 2½ stories; brick, concrete and stone; cost \$7000.

W. Va., Huntington.—Geo. W. Slicer has plans by and let contract to J. J. West, Huntington, to erect dwelling; 8 rooms; cost \$3000; brick; slate roof; gas heat and lighting to cost \$300. (Lately noted.)

GOVERNMENT AND STATE

Ga., Augusta.—Postoffice.—Cassini Bros., Macon, Ga., have contract for terrazzo floors in postoffice, for which W. H. Fissell & Co., New York, at \$283,800, have general contract; 3 stories and basement; fireproof; Georgia marble; tile and copper roof; 11,000 sq. ft. ground area. (Lately noted.)

HOTELS

Ala., Gadsden.—Gadsden Roofing Co. has contract for new roof for Printup Hotel and 30-room addition, for which contract has been let. (Lately noted.)

Fla., Lakeland.—Kibler Hotel Co. will expend \$30,000 to erect store and hotel building; 82x100 ft.; mill construction; tar and gravel roof; cost of heating plant \$1000; electric lighting; McGucken & Hyer, Architects, Tampa; contract (lately noted) let to Teasley & Co., 310 Citizens' Bank Bldg., Tampa. (See Machinery Wanted.)

Fla., Gulfport.—W. F. Woodard and F. J. Davenport let contract to Beard & French Construction Co., Bradenton, Fla., to erect hotel; 3 stories; 25 bedrooms; private electric light and power plants and waterworks; cost about \$25,000. (Lately noted.)

La., Mansfield.—H. J. Sheppard, owner of Sheppard Hotel, let contract to erect hotel; 3 stories; brick; 30 rooms.

Miss., Laurel.—Pinehurst Hotel Co. let general contract to I. C. Garber, Box 514, West Jackson, Miss., to erect hotel; let subcontracts as follows: Mill work, Enoch Lumber & Mfg. Co., Jackson, Miss.; painting, Barksdale & Harbison, Hattiesburg, Miss.; roofing tile, Ludowici-Celadon Co., Chicago; heating, plumbing, wiring, vacuum cleaning system, drain tile and sheet-metal work, S. A. Carnes, Laurel; hardwood, Stauffer-Eshleman & Co., New Orleans; iron work, Price-Evans Foundry Co., Chattanooga, Tenn.; contract not let for floor tile for lobby, requiring 1800 sq. ft. 9x9; De Buys, Churchill & Labouisse, Architects, New Orleans, La. (Lately reported to cost \$100,000.)

Tex., Henderson.—S. F. Whitson let contract to W. R. Allman, Sherman, to erect hotel; 61x75 ft.; 2 stories; 34 rooms; ordinary brick construction; asphalt roof; stoves; electric lighting; cost \$15,000; Wm. A. Tackett, Archt., Sherman, Tex.; contract for brick work let to Robt. Wood, Sherman, Tex.

MISCELLANEOUS

Ala., Birmingham.—Billiard Parlors.—R. D. Burnett let all contracts to repair building 50x140 ft. adjoining present structure for billiards. Lately reported to expend \$35,000 to arrange billiard parlors in Henly building.)

Ala., Gadsden.—Hospital.—Gadsden Roofing Co. has contract for slate roof and metal work for addition to hospital for Dr. A. W. Halls; 29 rooms; brick veneer; hydro-therapeutic baths; electroliers, etc. (Lately noted.)

Ala., Shawmut.—Auditorium.—Gallivant Building Co., Greenville, S. C., has contract to erect frame auditorium; plans by Park A. Dallas Co., 913 Candler Bldg., Atlanta, Ga.

Fla., Jacksonville.—Restaurant.—W. L. Sharkey and others are reported to expend about \$15,000 to improve Gilreath's restaurant; will provide kitchen, refrigerating plant, lower floor to street level and fit with tile, etc.; contract let.

Ga., Augusta.—Clubhouse.—Lakeside Boat Club let contract to Mobley & Crooks, Augusta, to erect clubhouse; 2 stories. Lately noted.)

Okl., Tulsa.—Grandstand.—Tulsa Baseball Club (John H. Markham, Jr., Harry F. Sinclair and others) will erect grandstand, level ground, etc.; construction by day labor under supervision of architect.

Tex., Fort Worth.—Clubhouse.—Glen Garden Club is reported to have let contract to E. R. Jennings, Jr., Dist. Mgr. for Mettler-Gloyd Co., to erect clubhouse; 2 stories and basement; red rock; cost \$8500.

Tex., Houston.—Parish-house.—Church of the Annunciation let contract to J. J. Green, Houston, to erect parish-house at Texas and Jackson Sts.; 2 stories; brick; 12 rooms; cost \$14,000; Sanguinet, Staats & Gottlieb, Architects, Houston.

Va., South Boston.—Stables.—Hodges & De Jarnette let contract to erect warehouse

with fireproof concrete stables for 400 horses on first floor; lately noted. (See Warehouses and Machinery Wanted.)

SCHOOLS

Fla., Orlando.—School Board let contract at about \$28,000 to Cahaw & Parker, Tampa, Fla., to erect school; plumbing and heating contracts not let.

Miss., Clinton.—Mississippi College, J. W. Provine, Prest., let contract to I. C. Garber, Jackson, Miss., to erect library; 44x100 ft.; fireproof; paper and gravel roof; steam heat; electric lighting; cost (without mechanical equipment) \$25,000; R. H. Hunt, Archt., Chattanooga, Tenn. (Previously noted letting contract to Mr. Garber to erect dormitory.)

Mo., Rolla.—Missouri School of Mines and Metallurgy let general contract to Robt. McCann, Rolla, at \$54,844 to erect gymnasium; 72x129 ft.; reinforced concrete; 4-ply asphalt roof; low-pressure steam heat, contract let to Peters & Elcher, St. Louis, Mo., at \$6119; electric lighting; H. H. Hohenschild, Archt., 310 Navarre Bldg., St. Louis; contract for plumbing let to John Gilmore, St. Louis, at \$2890. (Lately noted.)

N. C., Rocky Mount.—School Trustees let contract to D. J. Rose to erect school; 130x46 ft.; cost (without mechanical equipment) \$35,000; ordinary construction; slate roof; hot-air and fan system of heating to cost \$1000; T. Dwight Ryerson, Archt., 3759 Northampton St., Washington, D. C. (Lately noted.)

Tenn., Clarksville.—Southwestern Presbyterian University let contract to A. F. Speight, Clarksville, to erect dormitory; cost \$4000; ordinary construction; G. Tandy Smith, Jr. Clarksville. (Lately noted.)

Tenn., Jellico.—City let contract to Bina Young, Sweetwater, Tenn., to erect high school.

Tex., Fort Worth.—City let general contract to Payne Bros., Fort Worth, to erect school in Van Zandt Addition; 2 stories and basement; brick; auditorium to seat about 200; also let contract for brickwork to Echols Bros., Fort Worth; cost \$13,500; Van Slyke & Woodruff, Architects, Fort Worth and Oklahoma City, Okla.

Tex., Matagorda.—Matagorda Independent School Dist. let contract to Jones Bros., Bay City, to erect school. (Lately noted.)

Tex., Terrell.—School Board let contract to Reinhart & Donovan, 723 Insurance Bldg., Oklahoma City, to erect school; 2 stories and basement; cost (without mechanical equipment) \$75,000; fireproof; tar and gravel roof; steam heat; electric lighting; C. H. Page & Bro., Architects, Austin. (Lately noted.)

Va., Fredericksburg.—Buildings and Grounds Com., State Normal School, let contract at \$31,150 to J. C. Curtis, Denbigh, Va., to erect dormitory No. 2; fireproof; Chas. M. Robinson, Archt., Times-Dispatch Bldg., Richmond. (Lately noted.)

Va., Hollins.—Hollins College engaged Ed Parish, Hollins, to superintend construction of science hall, which will complete college group; 50x100 ft.; 3 stories; brick; slate roof; cost (without mechanical equipment) \$30,000; freight elevator; Frye & Chesterman, Architects, Roanoke, Va.; Stevens Bros., Lynchburg, Va., have contract for brick work; West Virginia Heating & Plumbing Co., Charleston, W. Va., heating and plumbing. (Lately noted.)

STORES

Ala., Clanton.—Samuel E. Johnson let contract to W. H. Powers & Co., Birmingham, Ala., to erect store and office building; 40x50 ft.; 2 stories; brick; ordinary construction; 4-ply tar and gravel roof; stoves; electric lighting; cost \$6000; Smith & Carter, Architects, Montgomery. (Lately noted.)

Ark., Fort Smith.—First Lutheran Church let contract to F. Schlueter & Son, Fort Smith, Ark., to erect parochial school and club; 80x72 ft.; 2 stories and basement; cost (without mechanical equipment) \$17,500; brick and stone; Bangor slate roof; Dunham system of vacuum-vapor steam heat; electric wiring to cost \$450; dumb-waiter to cost \$100; A. A. Chisholm, Archt., Fort Smith; heating contract let to Kahn & McKim, Fort Smith, at \$2150; electric work to Fort Smith (Ark.) Electric Supply Co. (Lately noted.)

D. C., Washington.—F. Coyle estate let contract to Boyle-Robertson Construction Co., 1576 H St. N. W., to erect 4-story brick and steel store at 314 7th St. N. W.; cost \$13,000; plans by Donn & Deming, 808 17th St. N. W.

D. C., Washington.—McKee Surgical Instrument Co. let contract to M. A. Weller, 629 F St. N. W., Washington, to erect store; 20x103

ft.; cost (without mechanical equipment) \$13,000; ordinary construction; tin roof; hot-water heat; electric lighting; electric elevator to cost \$2200; N. T. Haller, Archt., Corcoran Bldg., Washington. (Lately noted.)

Fla., Tampa.—Kibler Hotel Co. let contract to erect store and hotel building. (See Hotels.)

Fla., West Tampa, Sta. Tampa.—Manuel Y. Diaz let contract for store and office building. (See Bank and Office.)

Ga., Albany.—C. M. Shackelford let contract to Smith & Watson, Albany, to remodel building occupied by Joiner-Barnes Co.; steel and marble construction; fireproof windows; metal ceilings; plate-glass front; cost \$8000.

Ga., Arlington.—J. G. Jackson let contract to E. Hatcher, Arlington and J. B. Carpenter, Colquitt, to erect building to contain 2 stores; plate-glass front.

Ga., Atlanta.—Middleton estate (W. I. Middleton in charge) let contract to Chas. Bernhardt, Atlanta, to erect business building; 25x140 ft., 3 stories; face brick; mill construction; steam heat; sprinkler system; tar and gravel roof; plans by Hentz & Reid, 933 Candler Bldg.

Ga., Atlanta.—Willis Ragan let contract to J. B. McConnell, Atlanta, to erect store building; brick; basement, main and mezzanine floor; cost \$5000; plans by A. F. Everett, 508 Grand Bldg., Atlanta.

Ga., Athens.—Talmadge Bros. let contract to J. W. Watson & Son, Athens, to erect business building; 113x185 ft.; 2 stories; granite and brick; electric elevators; automatic sprinkler system.

Ga., Hartwell.—P. J. McMullan let contract to M. T. Suber, Macon, Ga., to erect two store buildings, each 20x75 ft.; 2 stories; brick; plate-glass front; tin roof; cost \$4000.

Ga., Savannah.—Solomon Co. has contract to remodel and equip store building; cost \$20,000; C. A. Gridley in charge of work.

Ky., Hazard.—Morgan & Roman let contract to erect 2 business buildings.

La., Lake Charles.—S. M. De Bakey let contract to Olivia & Sons to erect store building; 29x50 ft.; fireproof; cost \$4500; lighting, \$200; sidewalks, \$160; C. T. Carter, Archt. (Lately noted.)

Mo., St. Louis.—Sophir & Becker let contract to I. Saltzman to erect 3-story store at 1419-21 Franklin St.; steel and brick; frontage largely of glass; 31x120 ft.; cost \$15,000.

Mo., St. Louis.—F. Heidemann let contract to Schroeder & Co., St. Louis, to erect 2-story store and dwelling at 3314-16 California St.; cost \$6000.

Mo., St. Louis.—Pulitzer estate let contract to J. Black Masonry & Construction Co., St. Louis, to repair store at 513 Olive St.; cost \$22,000.

S. C., Greenville.—L. A. Mills let contract to W. G. Davidson, Greenville, to erect store building at North and Laurens Sts.; 2 stories; brick; 25x50 ft.; cost \$4500; Martin & Andrews, Architects.

Tenn., Knoxville.—L. D. Tyson let contract to L. A. Galyon & Son, Knoxville, to erect store and apartment-house; 60x140 ft.; 2 stories and basement; cost \$22,000; ordinary construction; gravel roof; steam heat; gas and electric lighting; cement sidewalks; Albert B. Baumann (successor to Baumann Bros.), 715 Benson Bldg., Knoxville; McGuin & Reich, plumbing and heating engineers. (Lately noted.)

Tenn., Memphis.—J. B. Snowden let contract to J. J. Faires, Memphis, for general

repairs to property at 124-26 N. Main St.; cost \$3500.

Tex., Dallas.—Broom & Laws let contract to W. R. Hatcher Construction Co., 106 Field St., Dallas, to erect wholesale store building; 100x115 ft.; cost (without mechanical equipment) \$90,000; fireproof and ordinary construction; gravel roof; H. A. Overbeck, Archt., Dallas.

Tex., Fredericksburg.—Peter Kleck let contract to erect building on San Saba St.

Va., Richmond.—I. H. Kaufman and G. K. Pollock let contract to W. A. Chesterman, Richmond, to erect store and office building at 726 E. Main St.; 2 stories; brick; cost \$10,517.

THEATERS

N. C., Lexington.—Princess Theater, F. C. Carroll, Prop., let contract to D. K. Cecil, Lexington, to erect theater and office building; 3 stories; 28x150 ft.; fireproof; cost \$20,000; Overcash & Props, Architects, Charlotte, N. C. (See Machinery Wanted.)

Va., Norfolk.—Palace Amusement Corp. let contract to Nash-Jones Co., Seaboard Bank Bldg., Norfolk, to erect moving-picture theater; 50x300 ft.; cost (without mechanical equipment) \$18,000; ordinary construction; tin roof; electric conduit system of lighting; J. D. Winn, Archt., 631 Law Bldg., Norfolk. (Nash-Jones Co. lately reported lowest bidder.)

Va., Richmond.—Byron Bear will erect motion-picture theater on Broad St.; cost \$15,000; W. C. West, Archt.; contract let to Armheim & Bro., Richmond.

WAREHOUSES

Ala., Guntersville.—Gadsden Roofing Co., Gadsden, Ala., has contract for 250 sq. yds. tar and gravel roofing on cotton warehouse to be erected by Guntersville Bank.

Ga., Atlanta.—E. D. Duncan let contract to Gude Co., Atlanta, to erect warehouse to be occupied by John Deere Plow Co.; 5 stories; 16,000 ft. floor space per story; mill construction; tar and gravel roof; heating not decided; electric freight elevator; J. C. Battle, Archt., Atlanta. (Lately noted.)

Ga., Augusta.—E. J. Lyon let contract to T. O. Brown & Son, Augusta, to erect warehouse; 80x134 ft.; mill construction; tin roof; cost \$25,000; cost of combination freight and passenger elevator \$2000; G. Lloyd Preacher, Archt., Augusta. (Lately noted under Stores.)

Md., Baltimore.—Thos. H. O'Connor, 311 Guilford Ave., let contract to Henry S. Ripple, 7 Clay St., Baltimore, to erect warehouse at 445 Guilford Ave.; 4 stories; brick; concrete foundation; fireproof; cost \$10,000. (Lately noted.)

S. C., Greenville.—Carolina Supply Co. is proceeding with construction of building lately noted; contract let to Fluke-Carter Construction Co., Greenville. (Previously described under Stores.)

Tex., Dallas.—C. A. Bryant let contract to Buchanan & Gilder, Dallas, to erect warehouse; 4 stories; steel and concrete; 71x90 ft.; cost \$50,000; C. W. Bulger, Archt., Dallas. (Lately noted.)

Va., South Boston.—Hodges & DeJarnette let contract to R. K. Stewart & Son, South Boston and Roanoke, Va., to erect tobacco warehouse; 32x165 ft.; 2 stories; first floor to contain 400 fireproof concrete stalls for horses; second floor tobacco salesrooms and offices; mill construction; sprinkler system; cost \$48,000; lately noted. (See Machinery Wanted.)

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Opelika.—Survey is shortly to be made for a contemplated electric railway from Opelika to Auburn, Ala., about 7 mi. W. S. Lounsbury, Secy. Opelika and Lee County Chamber of Commerce, may give information.

Ark., Bentonville.—Ozark States Trust Co., Springfield, Mo., John T. Woodruff, Prest., is reported interested in the plan for an interurban railway between Bentonville and Rogers, Ark., 6 mi., with lines for local service in two places. Recently noted that J. M. Hinchliffe of Springfield was making survey.

Ark., Fayetteville.—E. T. Chenoweth of McCrary, Kans.; S. E. Chinn of Rockport, Mo., and W. H. Harvey of Monte Ne, Ark., are reported planning construction of a railroad from Memphis, Tenn., to Coffeyville, Kans., about 350 mi.

Ark., Pine Bluff.—Dr. H. N. Street of Little Rock, Ark., representing W. J. Miller, says a report, announces that construction

will begin soon on a railroad from McClellan, on the Rock Island Lines, to Pine Bluff, 42 mi. E. B. Bloom, Secy. Chamber of Commerce, Pine Bluff, may give information.

N. C., Azalea.—North Fork Lumber Co. of Azalea will build 6 mi. of standard-gauge lumber railroad from a connection with the Southern Ry. George E. Lewis is Prest., Frank Fild V-P. and Gen. Mgr., W. B. McEwen Treas., and P. R. Moale Secy.

Fla., Bradenton.—East & West Coast R. R. Co., Allen W. Jones, Prest., has graded 31 mi. of its projected line from Manatee and Bradenton to Arcadia, Fla., 53 mi.

Ky., Lexington.—John G. King, Lexington, projects construction of an interurban railway from Lexington to Richmond, Ky., 26 mi.

Miss., Biloxi.—W. L. Covel, "engineer and promoter" of the proposed Biloxi Great Northern R. R., designed to run from Biloxi to a connection with either the Mobile & Ohio or the Queen & Crescent railways, about 100 mi., says that a company is not yet organized

and plans are not ready for announcement. An old charter is being revived.

Miss. Jackson.—It appears by a letter from J. W. Province of Clinton, Miss., that the Jackson-Clinton Motor Transit Co. does not propose to build a railroad, but to operate a gasoline automobile line between Jackson and Clinton, 10 mi.; capital \$10,000. Others interested are Dr. Julius Crister and E. J. Ellzey of Jackson.

Mo., Kingston.—Caldwell County & Southern R. R. Co. will build 9 mi. from Hamilton to Kingston, including a bridge of 120 feet over Shoal Creek and one over Tom Creek, 30 ft. Not yet ready for construction bids. David Miller of Kansas City is Pres.; L. L. Frost of Mirabelle is vice-president; Frank Bowman is Treas.; H. C. Shively, Secy., and S. C. Rogers, Ch. Engr., all of Kingston. P. Roberts of Hamilton is also interested.

Mo., Rolla.—Rolla, Ozark & Southern Ry. Co. is chartered to build a line from Rolla to Anutt, Mo., 18 mi. Headquarters at Rolla. Capital stock \$200,000. Incorporators are F. W. Webb, J. Ellis Walker and E. W. Walker of Rolla, E. C. Constock of Lecom and J. A. Frank of Anutt, Mo.

N. C., Shelby.—The Fallston-Belwood railroad district has voted to issue \$40,000 of bonds to aid the proposed railroad from Shelby via Beams Mill, Fallston and Belwood to Casar, N. C., 20 mi. O. M. Mull, Shelby, N. C., and others are interested.

S. C., Sumter.—Survey will be made from Sumter to Turberville, 20 mi. to build a railroad. R. F. McLellan is Engr. Address Sumter Chamber of Commerce.

Tenn., Dunlap.—Survey is about to begin for a railroad proposed by the Chattanooga Iron & Coal Corporation from Dunlap to its lands in Brush Creek Gulch.

Tenn., Lebanon.—Nashville, Chattanooga & St. Louis Ry. has applied to the Board of Commrs. for authority to build an extension of 1 mi. and a passenger and freight depot. Extension to Sparta, Tenn., about 60 mi., is reported contemplated. Hunter McDonald, Nashville, Tenn., is Ch. Engr.

Tenn., Nashville.—Application is made to charter the Nashville, Shiloh & Corinth Ry. Co., with \$100,000 capital stock, to build the projected line from Nashville to Corinth, Miss., about 140 mi. Allen W. Jones of Augusta, Ga., is to arrange the financing. Geo. S. Bruce is Engr. Others interested are W. M. Pollard of Nashville, Chrmn.; Maj. E. B. Stahlman and others of the Commercial Club; J. P. Beesley and others of the Business Men's Association, and R. L. Burch and others of the Industrial Bureau, all of Nashville, Tenn.; also Clifton Thomas, Secy. of the Corinth Board of Trade. Maximum grades are to be 1 per cent. and maximum curves 4 degrees.

Tex., Dallas.—Kelmott Electric Co., capital \$500, is reported organized to build railways, including belt line, in and near Dallas and to operate by electricity. J. A. Saunders and others interested.

Tex., Dallas.—Eastern Texas Traction Co. has graded all but about 1½ mi. of its 53 mi. proposed railway from Dallas to Greenville, Tex. All culverts, 90 per cent. of concrete work and 40 per cent. of bridges are done. J. W. Crotty is V.-P. and Gen. Mgr.

Tex., San Antonio.—Company is reported organized to build an interurban railway from San Jose to Kirk, Tex., with \$100,000 capital. The Chamber of Commerce of San Antonio may be able to give information.

Tex., Slaton.—Santa Fe system is reported contemplating extension of its Pecos & Northern Texas Ry. from Slaton to Fort Worth, Tex., about 230 mi. F. M. Bisbee, Amarillo, Tex., is Ch. Engr.

W. Va., Charleston.—Plans are reported prepared to build the proposed line of the Charleston & Interurban Ry. Co. from Charleston to Montgomery, W. Va., about 25 mi. S. M. Gallaher, P. O. Box 994, Charleston, W. Va., is Supt., and M. W. Venables & Son, also of Charleston, are Engrs.

W. Va., Fayetteville.—Ordinance is passed granting franchise to the Fayette Traction Co., C. W. Dillon, Pres., to build in Fayetteville its line which will connect with Fayette Station, 3 mi.

W. Va., Parkersburg.—Proposed route of the Charleston, Parkersburg & Northern R. R. is from Parkersburg via Rockport, Sandyville, Ripley, Fairplains, Kenna, Sissonville and Guthrie to Charleston, W. Va., about 75 mi. H. H. Archer is Pres., K. B. Stephenson Secy., and C. B. Kefauver Asst. Treas. Others interested are D. M. Peadro, U. G. Wile, C. A. Meyer and R. C. Stapleton, all of Parkersburg. R. R. Cutler is Ch. Engr.

STREET RAILWAYS

D. C., Washington.—Triangular Mono-Railroad Co. of Washington has been char-

tered under the laws of Delaware; capital \$1,000,000. Incorporators are Frank L. Peckham, 1421 M St. N. W.; George L. Peckham, Riggs Bldg., 15th and G Sts. N. W., Washington, and Thomas C. Shelling of New York.

Mo., St. Louis.—St. Louis & Jennings Ry. Co. is authorized to extend its line farther into St. Louis county on Helen Ave. to Melrose Ave. in West Walnut Manor.

Okl., Cushing.—May 15 an election will be held on a franchise to the Cushing Traction Co. to build an electric street railway and to extend it to the oil fields. Frank Brown of Independence, Kans., is Pres.; B. R. Jones of Bristow, Okla., V.-P., and Harry Asklin of Cushing, Gen. Mgr.

Tenn., Nashville.—Nashville Traction Co., the new street railway corporation, has laid 5 blocks of track and is continuing to push construction. Walter O. Farmer is Pres.

Tenn., Clarksville.—Clarksville Street Ry. Co. has submitted a plan to the Chamber of Commerce concerning its contemplated construction of an extension to Dunbars Cave, 3 mi. from Clarksville. A. C. Murray is Gen. Mgr.

Tex., Dallas.—John T. Jones has applied for a street-railway franchise on Fitzhugh Ave. from Columbia to Grand St.

Tex., Laredo.—Laredo Electric & Ry. Co. proposes to build 3½ mi. of track. F. E. Seovill is Mgr.

Va., Graham.—The Appalachian Power Co., Bluefield, W. Va., will not, it is understood, build the extension in Graham (for which franchise was recently secured) for some time.

Va., Lynchburg.—Lynchburg Traction & Light Co. may build some additional second track. R. D. Apperson is president.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Agricultural Implements.—Templeman's Milling & Canning Co., R. L. Parker, Mgr., Templeman Crossroads, Va.—Prices on agricultural implements.

Aluminum.—Roby Cleaning & Polishing Machine Corp., Staunton, Va.—Prices on sheet and pig aluminum.

Bag Machinery.—Beaumont Mfg. Co., Spartanburg, S. C.—Interested in machinery to make and print Bates valve patent cement bags.

Bakery Equipment.—Hazard Wholesale Baking & Supply Co., G. D. Halliday, Secy.-Treas., Hazard, Ky.—Bids May 30 to install mixer, scales, wrapping machine, shipping baskets, breadboards, etc.

Bakers' Ovens (Gas).—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on bakers' gas ovens for school.

Bathroom Fixtures.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on bathroom and toilet fixtures for school.

Beds, etc.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on iron beds and bedding.

Bell.—Sterling Cotton Mills, Franklinton, N. C.—Large bell for mill.

Beltting.—Selma Cotton Mill, Selma, N. C.—Beltting.

Boiler.—Princess Theater, F. C. Carroll, Propr., Box 464, Lexington, N. C.—Prices on boiler.

Boiler.—Lilly Ice & Bottling Works, Prince E. Lilly, Pres., Glen Morgan, W. Va.—Prices on new or second-hand furnace boiler, 80 to 100 H. P., for plant at Pemberton, W. Va.

Boiler.—A. C. Lyons, Fairmont, W. Va.—Prices on 60 H. P. new or second-hand steam boiler.

Boiler.—E. A. Hickson, Mayor, Mcanopy, Fla.—Prices on 80 H. P. return tubular boiler.

Boiler.—Houston County Oil Mills & Mfg. Co., Crockett, Tex.—Prices on 72x18 high-pressure boiler.

Boiler.—Selma Cotton Mill, Selma, N. C. 150 H. P. return tubular boiler; 72x18; 150 lbs. steam pressure.

Books.—W. C. Allen, Chrmn., Board of Library Mgrs., Latta, S. C.—Price lists on books of fiction, biography, reference, etc.

Brass and Steel.—Roby Cleaning & Polishing Machine Corp., Staunton, Va.—Prices on plain and nickled brass and steel.

Bricks.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish 145,000 buff paving bricks, schedule 667; delivery Philadelphia, Pa.; for copies of schedules apply to navy pay office nearest navy-yard.

Brick.—See Paving Materials, Jacksonville, Fla.

Brick.—J. W. Teasley & Co., 810 Citizens' Bank Bldg., Tampa, Fla.—Prices on Georgia brick, with samples, for \$30,000 store and hotel building.

Bridge Construction.—Bryan County Commrs., J. P. Bashor, Commr., Clyde, Ga.—Bids May 4 to construct bridge across Canoechee River; 575 ft. long; 14 ft. wide; caps, 12x12 cypress heart %; round cypress post dipping 12 in. at top or small end, and to be % heart; flooring of bridge to be of 3-in. heart cypress and to be laid % in. apart; bridge elevated 2 ft. above level of land abutting; plans and specifications at office Commrs.

Bridge Construction.—Fred Fries, City Clerk, San Antonio, Tex.—Bids until May 11 to construct 2 concrete bridges and remove and re-erect 2 iron bridges; plans and specifications at office of City Clerk.

Bridge Construction.—Harris County, H. L. Washburn, Auditor, Houston, Tex.—Bids until May 4 to construct bridge on N. Main St.; 150 ft. long; concrete; Howe & Wise, Engrs., First National Bank Bldg., Houston.

Bridge Construction.—Highland County Commrs., Monterey, Va.—Bids until May 4 to construct 2 bridges as follows: 1 known as Vanderpool bridge, 54 ft. long; steel; 2 spans, 27 ft. long; 1 over Crabbottom, near New Hampden; 37 ft. long; steel standard span, 27 ft.; both to have 12-ft. roadway; concrete substructure (alternate bids on cement rubble); plans and specifications at office of C. P. Coleman, State Highway Engr., or at office of Clerk of Circuit Court; blueprints may be secured from Childrey Co., Richmond, Va., at cost of 30 cents and postage.

Bridge Construction.—Manatee County, Bradenton, Fla.—Bids until May 4 to make alterations to bridge No. 1 on Braden Creek; plans and specifications at office Robt. H. Roesch, Clerk.

Bridge Construction.—Norfolk County, J. J. Dalton, Road Engr., Royster Bldg., Norfolk, Va.—Bids until Apr. 27 to construct highway bridge across East Canal, Providence Rd., Washington Dist.; Nine-Mile bridge near Bowers Hill; repairing Dock Creek drawbridge, both in Western Branch Dist.

Bridge Construction.—State Highway Com., G. P. Coleman, State Highway Commissioner, Richmond, Va., and Fairfax County Commrs., Fairfax, Va.—Bids until May 6 (postponed from Apr. 8) to construct 3 steel or concrete bridges as follows: One over Piney Branch, 30 ft. long; one over Segerwood Branch, 20 ft. long, and one over Dogue Run, 20 ft. long; all to have 16-ft. roadway; concrete substructures; plans and specifications at offices of County Clerk and Engr., Alexandria, Va.; blueprints on application to Childrey & Co., Virginia Ry. & Power Co. Bldg., Richmond, Va., at cost of 50 cents and postage.

Bridge Construction.—Taylor County, Butler, Ga.—Contract let May 10 to construct steel bridge with reinforced concrete abutments and concrete floor near Howard, Ga.; 150 ft. long; plans and specifications at office H. P. Wallace, Clerk.

Building Materials.—H. C. Bartholomew, Lake Worth, Fla.—Prices on composition roofing, sash, doors, hardware, plumbing, materials and lumber.

Building Materials.—W. T. Watt, Waco, Tex.—Prices on all kinds of building materials for store, hotel and office building to cost \$400,000.

Building Materials.—Peter Branstetter, Horse Cave, Ky.—Prices on building materials for 50x30-ft. garage.

Building Materials.—Happ & Shelverton, Macon, Ga.—Estimates on ornamental terra-cotta, iron work, metal windows, lumber, plate and prism glass for \$18,000 store building.

Building Materials.—T. H. Wickham, Beckley, W. Va.—Prices on stone for columns and trimmings, roofing, steel beams, plate-glass, steel safety doors, composition covering for concrete floors and floor tile.

Building Materials.—W. R. Lyons, Horse Cave, Ky.—Prices on building materials for A. F. and A. M. Bldg.

Canning Machinery.—Templeman's Milling & Canning Co., R. L. Parker, Mgr., Templeman Crossroads, Va.—Prices on canning machinery.

Canning Machinery.—A. A. Gee, Keyville, Va.—Prices on canning machinery; outfit using steam pressure; consider second-hand machine.

Car (Flat).—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa.—Second-hand, 50-ton capacity, steel-body flat car for carrying railroad ditcher.

Cars.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa.—Second-hand standard gauge caboose car.

Cars.—S. H. Baker, Box 884, Richmond, Va.—Prices on several 6-yd. dump cars.

Carpet, etc.—W. R. Lyons, Horse Cave, Ky.—Prices on carpet and rugs for A. F. and A. M. hall.

Cement.—M. E. Worrell, Murfreesboro, N. C.—Prices on one car cement; delivery Tunis, N. C.

Cement.—See Paving Materials, Jacksonville, Fla.

Cement.—Selma Cotton Mill, Selma, N. C.—Cement.

Church Furniture.—Trustees of Second Baptist Church, Geo. K. Bender, member of committee, 423 N. Alfred St., Alexandria, Va.—Addresses of manufacturers of church furniture.

Coal.—Water and Light Dept., Newbern, N. C.—Bids, addressed to F. T. Patterson, City Clerk, until May 5, for coal supply from that date until Apr. 1, 1915; estimated requirement, 200 to 300 tons standard run mine coal.

Coal.—Mississippi River Com., Clarke S. Smith, Maj., Engrs., Secy., International Life Bldg., St. Louis, Mo.—Bids until May 11 to furnish 28,200 tons of coal in barges. Information on application.

Composition Floor Covering.—See Building Materials.

Concrete Stalls.—R. K. Stewart & Son, South Boston, Va.—Prices on fireproof concrete stall for about 400 horses.

Concrete Wall.—Street Comm., Piedmont, W. Va.—Bids until Apr. 22 to construct reinforced concrete wall; 370 ft. long; plans and specifications at office City Recorder or Engr.

Crane.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, Chief of Bureau, Washington, D. C.—Bids until May 2 to furnish and install 3-motor 20-ton electric traveling crane at Navy-yard, Boston, Mass. Information on application.

Crushers.—Eastern Railway Supply Co., 413 American Bldg., Baltimore, Md.—Two portable stone crushers.

Crusher.—See Stone-working Machinery.

Dies.—See Glove Machinery, etc.

Drainage.—Kinder Drainage Dist. No. 2, Kinder, La.—Bids until May 13 for removal of about 573,000 cu. yds. earth in construction of 4 main canals with their laterals and branches; clearing and partial removal of logs, stumps and debris of about 187 acres right of way; construct one and remove and reconstruct three main line railroad trestles; remove and reconstruct two log tram trestles; plans and specifications on file J. F. Hervey, Chief Engr., Jennings, La., or with L. M. Lafleur, Secy., Board, Kinder, and blanks supplied on application to either.

Dredging.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, Chief of Bureau, Washington, D. C.—Bids until May 9 for dredging at Navy-yard, Boston, Mass.; amount available, \$10,000. Information on application.

Dredging.—U. S. Engr. Office, G. P. Howell, Maj., Engrs., Charleston, S. C.—Bids until May 13 to dredge in Waccamaw

river, North and South Carolina. Information on application.

Electrical Equipment.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C.—Bids May 5 to furnish 6200 ft. insulated and lead-covered cable, 500,000 C. M. and 212,000 C. M., and 3000 ft. insulated paper lead-covered telephone cable, 50 pr. and 25 pr., schedule 6665; delivery Newport, R. I.; 1400 ft. submarine cable, 4-cond. and 2400 roll, schedule 6655; delivery Fort Lafayette, N. Y.; three 1-ton and three ½-ton self-contained electric hoists, schedule 6663; 8000 ft. weatherproof, triplex covered, copper wire, solid, 52,000 C. M., schedule 6664; delivery Norfolk, Va.; 1500 ft. single and duplex rubber insulated wire, 26,300 C. M. lead-covered, schedule 6664; 5000 ft. single cond. wire, 500 C. M., leaded and armored soft steel, schedule 6667; delivery Brooklyn, N. Y.; for copies of schedules apply to navy pay office, nearest navy-yard.

Electric Motors.—Roby Cleaning & Polishing Machine Corp., Staunton, Va.—Prices on small electric motors.

Electric-light Plant.—M. E. Worrell, Murfreesboro, N. C.—Prices on material and equipment, except power, for municipal plant; about 600 lights.

Electric-light Plant Supplies.—P. T. Vaughn, Horse Cave, Ky.—Prices on supplies for electric-light plant.

Electrical Machinery.—Electrical Utilities Exchange, 352 Bee Bldg., Omaha, Neb.—Prices on used 3-phase A. C. generators, small sizes; also larger engine and turbine-driven units.

Electrical Machinery.—Kinarivala Bros. & Co., Sakar Bazar, Kalapur, Ahmedabad, India.—Correspondence with American manufacturers of electric meters to measure electricity, and dynamos and dynamo motors to develop from 1 to 50 H. P. Send prices and data.

Electrical Machinery.—Call Machine & Supply Co., Wm. P. Call, Secy., Box 337, Pikeville, Ky.—Bids June 10 to install dynamos. (See Machine Shop Equipment.)

Electrical Machinery.—Princess Theater, F. C. Carroll, Propr., Box 404, Lexington, N. C.—Prices on dynamo for lighting 3-story 28x150-ft. building.

Electrical Machinery.—Templeman's Milling & Canning Co., R. L. Parker, Mgr., Templeman Crossroads, Va.—Prices on electrical equipment.

Electrical Machinery.—E. A. Hickson, Mayor, Micanopy, Fla.—Prices on 60 K. W. direct-connected generator; also on wire and other materials for electric plant.

Elevator.—Heitman-Evans Co., Fort Myers, Fla.—Addresses of manufacturers relative to installation of electric or cable system elevator, or both.

Elevators.—Happ & Shelverton, Macon, Ga.—Estimates on elevators for \$18,000 store building.

Engine.—A. C. Lyons, Fairmont, W. Va.—Prices on 25 H. P. new or second-hand horizontal engine.

Engine.—Columbian Peanut Co., Norfolk, Va.—100 H. P. Corliss engine.

Engine.—Princess Theater, F. C. Carroll, Propr., Box 404, Lexington, N. C.—Prices on engine.

Engine.—Elberton Oil Mills, Elberton, Ga.—Second-hand 14x36 Corliss engine; 150 H. P.; No. 1 condition, used but few years.

Engine.—J. J. Shaver, Chapel Hill, Tex.—Prices on engine for lifting water to top of building.

Ferrules (Metal).—Dr. C. H. Stearns, care Billboard Pub. Co., Cincinnati, O.—Plans and specifications on ferrules, 2½ top 2¼ bottom, of 1½x¼ malleable iron or steel, for banding stakes.

Fertilizer Machinery.—Fork Township Oil Mill, T. B. Jones, Mgr., Townville, S. C.—Interested in prices on machinery for fertilizer mixing plant.

Filling Machinery.—Graner Mfg. Co., 2163 Main St., Wheeling, W. Va.—Cuts and prices on machines for filling bluing and talcum powder in boxes; samples furnished; also machines for filling extracts, castor oil, etc., in bottles.

Fire Escapes.—J. W. Teasley & Co., 810 Citizens' Bank Bldg., Tampa, Fla.—Prices on fire escapes for \$30,000 store and hotel building.

Forges, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C.—Bids May 26 to furnish miscellaneous lot extruded metal bridge brass bars, schedule 6684; davits and chocks and 5 portable rivet forges, schedule 6685; miscellaneous lot brass bridge plating, schedule 6684; delivery Mare

Island, Cal.; for copies of schedules apply to navy pay office, nearest navy-yard.

Foundry Machinery.—Ballou Safety Rail Joint Co., Ashby Williams, Secy., Roanoke, Va.—Prices on automatic machinery to manufacture safety rail joints.

Fountains.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on sanitary drinking fountains for school.

Furniture.—See Machinery, etc.

Furniture.—Smith & McGuire, Horse Cave, Ky.—Prices on furniture for store.

Furniture.—See Church Furniture.

Furniture.—W. R. Lyons, Horse Cave, Ky.—Prices on furniture for A. F. and A. M. hall.

Furniture (School).—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on furniture for school.

Garbage Reduction Plant.—City of Akron, O.—Bids until May 15 at office C. P. Parker, Director of Public Service, to erect garbage reduction equipment in buildings shown on plans accompanying specifications; plans, forms, etc., at office Cons. Engr., R. Winthrop Pratt, Hippodrome Bldg., Cleveland, O., or obtainable on deposit of \$15.

Garage Supplies.—Peter Branstetter, Horse Cave, Ky.—Prices on supplies for garage.

Gas (Natural) Fixtures.—John H. Gardner, Saylorsville, Ky.—Prices on fixtures to furnish house with natural gas.

Glass Fronts.—J. W. Teasley & Co., 810 Citizens' Bank Bldg., Tampa, Fla.—Prices on plate-glass fronts with copper bars, etc., for \$30,000 store and hotel building.

Glove Machinery, etc.—A. C. Boyd, Langdale, Ala.—Addresses of manufacturers of dies and other machinery for making canvass gloves.

Hammocks.—P. Eshman, 510 Silver St., Marion, O.—Addresses of hammock manufacturers, with view to placing order for making (by thousands) hammock of special design.

Handle Machinery.—J. H. Jackson, Lake Carrier, Miss.—Addresses of manufacturers of machinery relative to manufacturing cross-cut saw handles.

Heater.—Selma Cotton Mill, Selma, N. C.—Open heater for 500 H. P. boiler capacity.

Heating Plant.—F. P. McConnell, care of Manchester National Bank, Richmond, Va.—Bids on heating plant for bank, store and lodge building.

Heating Plant.—Navy Dept., Bureau of Yards and Docks, H. R. Stanford, Chief, Washington, D. C.—Bids until May 23 to furnish and install boilers, oil burners, piping, etc., in heating plant at Naval Hospital, U. S. Navy-yard, Mare Island, Cal.; specifications, etc., on application.

Heating Plant.—E. S. Ligon, Prest., Blackstone Academy, Blackstone, Va.—Prices on steam heating plant for \$40,000 school building.

Heating (Steam) Appliances.—Templeman's Milling & Canning Co., R. L. Parker, Mgr., Templeman Crossroads, Va.—Prices on heating (steam) appliances.

Hydrants, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C.—Bids June 2 to furnish miscellaneous lot cast-iron man-hole frame and covers, 8 hydrants and 7000 lbs. No. 1 pig lead, schedule 6680; delivery Pearl Harbor, Hawaii; for copies of schedule apply to navy pay office nearest navy-yard.

Ice Machinery.—Morehead City Sea Food Co., Morehead City, N. C.—Bids on machinery for 15-ton ice plant.

Iron Work.—R. K. Stewart & Son, South Boston, Va.—Prices on iron work for 28x15 ft. \$48,000 warehouse.

Kitchen Equipment.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on kitchen equipment for school to accommodate 200 students.

Knitting Machinery.—W. C. McCommons, Thomson, Ga.—Addresses of manufacturers of hosiery machinery.

Laboratory Equipment.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on equipment for two laboratories.

Lamp Posts.—Board of Awards, Jas. H. Preston, Prest., Baltimore, Md.—Bids until Apr. 29 at office Richard Gwinn, City Registrar, City Hall, to furnish ornamental lamp posts; plans and specifications in office Robt. J. McCuen, Supt. Lamps and Lighting.

Laundry and Cleaning Machinery.—Treasurer's Office, U. S. Soldiers' Home, Washington, D. C.—Bids until Apr. 20 to furnish and deliver at U. S. Soldiers' Home, Washington, D. C., laundry machinery as follows: Dry-cleaning plant, cleaning washer, dry-cleaning tumbler, solid curb extractor, dry-cleaning garment press for steam pipe connection without tank, 2 extension brackets, track tub, 2 electric irons and spotting board. For laundry and hospital: Half section truck dryroom, sterilizing washer and 20-in. extractor. For laundry and power-house: Flannel washer, steam drying tumbler, bishop, cuff breast, collar and cuff starcher, collar and cuff dampener, hot tube shaper, 6 electric irons, steam-heated collar and cuff ironers, steam dampener, reversed sleeve ironer. Information on application. W. T. Hughes, Col., U. S. A. Treas.

Levee Construction.—Kaufman County Improvement Dist. No. 1, E. K. Atwood, Chrmn., Ennis, Tex.—Bids until May 22 to clear and grub right of way and construct levees, sluice gates, etc., along Texas Midland Ry. and Trinity River; Section A, 30,000 cu. yds., from foothills to river; sec. B, \$9,000 cu. yds., from Ry. Sta. O to Sta. 120; sec. C, 104,000 cu. yds., Sta. 120 to Sta. 240; sec. D, 104,000 cu. yds., Sta. 240 to Sta. 360; sec. E, 91,000 cu. yds., Sta. 360 to Sta. 458; amounts approximate; bids on whole; specifications, etc., office of O. W. Finley, Engr., Ennis, Tex., and obtainable from engineer.

Lighting Fixtures.—Princess Theater, F. C. Carroll, Propr., Box 404, Lexington, N. C.—Prices on lighting fixtures for 3-story 28x150-ft. building.

Lighting Fixtures.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on gas and electric-lighting fixtures for school.

Lime.—Selma Cotton Mill, Selma, N. C.—Lime.

Lime Kilns.—Bromide Oilfield Stone Co., Bromide, Okla.—Two lime kilns.

Locomotive.—S. H. Baker, Box 884, Richmond, Va.—Prices on 12-ton 36-in. gauge Mogul locomotive.

Locomotive.—McEwen Lumber Co., Azalea, N. C.—Quotation, description and location of second-hand Climax or Lima standard-gauge geared engine; for lumber road.

Locomotive.—Prince E. Lilly, Glen Morgan, Va.—Prices on 6 to 10-ton (new or second-hand) locomotive engine for Lilly Mining Co.

Locomotives.—A. G. Ricks, Commr., New Orleans, La.—Bids until May 5 to construct and deliver to Public Railroad Com. 1 or 2 standard gauge switching locomotives, in accordance with specifications on file in office of Public Belt Railroad Com.

Locomotive.—Bromide Oilfield Stone Co., Bromide, Okla.—Small switch engine.

Locomotives.—O. M. Mull, Shelby, N. C.—Prices on locomotives. (See Railway Materials and Supplies.)

Lumber.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C.—Bids May 4 to furnish 5650 ft. clear and select hemlock and miscellaneous lot of yellow pine, etc., No. 1 spruce, rough 4 sides, schedule 6653; delivery Iona Island, N. Y.; 34,280 ft. rough yellow pine, schedule 6653; delivery Portsmouth, Va.; 150 10 and 12-in. spruce sticks, schedule 6661; delivery Brooklyn, N. Y.; for copies of schedules apply to navy pay office.

Lumber.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C.—Bids June 2 to furnish 10,000 ft. No. 1 clear white cedar, 270,000 ft. dressed douglas fir, etc.; 650,000 ft. douglas rough fir, 16,000 ft. No. 1 seasoned white oak, 90,600 ft. miscellaneous redwood, miscellaneous lot shingles and laths, 6000 ft. commercial lengths clear spruce and bridge ties and douglas fir, schedule 6659; delivery Pearl Harbor, Hawaii; for copies of schedules apply to navy pay office, nearest navy-yard.

Lumber.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C.—Bids May 12 to furnish 198 40 and 60 ft. bearing and fender piles, schedule 6669; delivery Brooklyn; 165,000 ft. No. 3 white pine boards, 1x12 in., schedule 6680; delivery Washington, D. C.; 5000 ft. Georgia yellow pine flooring, schedule 6670; delivery Annapolis, Md.; 2000 cross-ties and 9600 cross-ties pine timbers, schedule 6689; delivery Philadelphia, Pa.; for copies of schedules apply to navy pay office, nearest navy-yard.

Machinery, etc.—B. Trueba, 356 W. 23d St., New York.—Correspondence (view to agency) with mfrs. of machinery, including sugar, cotton, coffee, coconut, power, road and contracting machinery, agricultural implements, etc.; also house furniture, type-

writer machines and supplies, iron work for house, etc.; will develop market in San Domingo.

Machine Shop Supplies.—Roby Cleaning & Polishing Machine Corp., Staunton, Va.—Prices on general supplies for machine shop repair work.

Machine Shop Equipment.—P. O. Box 522, Augusta, Ga.—Data, prices, etc., on machinery, tools, etc., to equip modern garage, making specialty of selling, storing and repairing automobiles.

Machine Shop Equipment.—Call Machine & Supply Co., Wm. P. Call, Secy., Box 337, Pikeville, Ky.—Bids June 10 to install sheet metal machinery, lathes, drills, planers, shapers, dynamos; direct motor driven.

Manual-training Equipment, etc.—Board of Awards, John Hubert, Acting Prest., Baltimore, Md.—Bids until Apr. 29 to furnish School Comms. with manual-training equipment and supplies; specifications at office Comms.

Mattress Machinery, etc.—W. C. McCommons, Thomson, Ga.—Addresses of manufacturers of machinery and materials for mattress making.

Metals.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C.—Bids May 12 to furnish 12,800 lbs. round robin bronze rod, schedule 6672; miscellaneous lot hard-drawn torpedo bronze, 300 lbs. phosphor hard bronze sheet, 300 lbs. 750 mils. ¾ in. diam. monel metal rod, miscellaneous lot mild steel rod and 3000 lbs. 30x96 in. black sheet steel, schedule 6681; delivery Newport, R. I.; 50 rough steel forgings, 3 in. liner, 18 rough steel forgings 12 in. liner schedule 6671; f. o. b. works; miscellaneous lot steel rails and angle splice plates, schedule 6669; delivery Philadelphia, Pa.; miscellaneous lot cold-rolled steel square sections, schedule 6673; delivery Brooklyn; floor ribbed-steel plates, schedule 6674; delivery Charleston, S. C.; for copies of schedules apply to navy pay office nearest navy-yard.

Metals.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General, Washington, D. C.—Bids May 5 to furnish 10,000 lbs. ¾ in. spinning rod brass, 22,000 406 and \$20 mils. rod brass, 20,000 625 mils. ¾ in. diam. primer rod bronze and 1000 lbs. self-fluxing solder, schedule 6654; delivery Newport, R. I.; for copies of schedules apply to navy pay office, nearest navy-yard.

Metal Furniture, etc.—Treasury Dept., Office of O. Wenderoth, Supervising Archt., Washington, D. C.—Bids until May 15 for wire screen partitions and metal counters and desks, U. S. Postoffice and Courthouse, San Juan, P. R.; drawings and specifications at office.

Metal Ceilings.—E. S. Ligon, Prest., Blackstone Academy, Blackstone, Va.—Prices on steel ceilings for \$40,000 school building.

Motors, Pumps, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until May 8 to furnish motors and centrifugal pumps, float switches, electric cable, blubitt metal, sheet copper, sheet brass, bronze bars, brass tubing, steel wire, nuts, tacks, rivets, bolts, screws, repair links, hammers, blacksmith's punches, pipe cutters, dies, ratchet drills, twist drills, wrenches, saws, pliers, blinges, wire-rope thimbles, hack-saw frames, files, tool handles, mop handles, truck handles, wheelbarrows, padlocks, trowels, wardrobe locks, spirit levels, cant hooks, grease cups, engine lubricators, lanterns, water gauges, window glass, carlocks, hose packing, asbestos gaskets, manila rope, marine, twine, mop heads, chamois skins, toilet paper, paper drinking cups, fire clay, asbestos cement, metal polish, soap polish, mahogany doors, windows, sash and frames with hardware, and oats; blanks and general information relating to this circular (No. 845) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney Central Bldg., New Orleans; and 1096 North Point St., San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Musical Instruments.—J. S. Wilson, Bailey, N. C.—Correspondence with manufacturers of musical instruments.

Office Fixtures.—Princess Theater, F. C. Carroll, Propr., Box 404, Lexington, N. C.—Prices on office fixtures for 3-story 28x150-ft. theater and office building.

Oil.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-General,

Washington, D. C.—Bids May 22 to furnish 1,350,000 barrels of fuel oil, schedule 6645; delivery Brooklyn, N. Y., and Mare Island, Cal.; for copies of schedule apply to navy pay office nearest navy-yard.

Oil Well Supplies.—Badger Petroleum Co., 725 American Bank Bldg., Oklahoma City, Okla.—Prices on general oil well supplies.

Paving.—A. G. Riels, Commr., New Orleans, La.—Bids until Apr. 28 to pave Clouet St. from Royal St. to St. Claude Ave. with Rudolph S. Blome granitoid concrete blocked pavement in accordance with plans and specifications in office of City Engr.

Paving.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Apr. 27 to grade and pave Austin St. from Franklin to International & Great Northern tracks; E. E. Sands, City Engr.

Paving.—City Commrs., Julian Kendrick, City Engr., Birmingham, Ala.—Bids until April 28 to pave with asphaltic concrete Ave. H from 11th St. to 12th St. and 11th St. from Ave. H to Sylvan Ave.; estimated cost \$7500; open specifications. Bids at same time to grade and macadamize 38th St. from Ave. B to Ave. F; about 5000 yds. excavation, 1400 cu. yds. macadam and 4000 yds. cement work; estimated cost \$7250.

Paving.—Street Dept., J. H. Dingle, City Engr., Charleston, S. C.—Bids in duplicate until May 5 for about 65,000 sq. yds. paving on concrete base; probably 20,000 to 25,000 yds. wood block and remainder sheet asphalt, asphaltic or bituminous concrete, or bitulithic; specifications furnished.

Paving, etc.—City of Florence, Ala.—Bids until May 4 to pave with water-bound macadam 2500 ft. roadway on Royal Ave. and Huntsville Rd.; work includes 8000 sq. yds. macadam pavement, 1000 ft. combination curb and gutter and 500 ft. drain tile, etc.; plans and specifications at office of Lund & Hill, Consult. Engrs., Little Rock, Ark.; A. M. Lund, City Engr.

Paving, etc.—City of Port Tampa, Fla.—Bids until May 4 to construct 11,248 sq. yds. brick and concrete pavement and 12,200 lin. ft. concrete curb and gutter; plans and specifications at office City Engr.

Paving Materials.—County Commrs., Courthouse, Jacksonville, Fla.—Bids (mailed or delivered to Frank Brown, Clerk of Circuit Court) until May 6 to furnish materials to pave with concrete and (or) vitrified paving brick on county road from south end of brick pavement on John Anderson highway through Bayard to county line, 21,946 ft., 15 ft. wide between curbing; delivery, car lots at Durbin, Bayard or Jacksonville; copies of specifications pertaining to sand, cement, broken stone and vitrified brick obtainable from A. F. Harley, Consult. Engr., Jacksonville.

Paving Materials.—Office of City Clerk, San Antonio, Tex.—Bids on 35,000 to 100,000 ft. following paving materials: 4-in. standard vitrified brick, 3-in. and 2½-in. vertical vitrified fiber brick, 3 and 3½-in. creosoted long-leaf yellow pine blocks.

Pianos (Electrical).—W. B. Davis, care Bank of Jena, Jena, La.—Prices on electrical pianos.

Piles.—U. S. Engr. Office, C. McD. Townsend, Col. Engrs., Custom-house, St. Louis, Mo.—Bids until May 6 to furnish piles. Information on application.

Pipe Organ.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on pipe organ for school.

Pipe.—Selma Cotton Mill, Selma, N. C.—Wrought and cast-iron piping.

Pipe, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish miscellaneous lot caps, pipe, malleable iron and flanges and floor rail, schedule 6679; delivery Newport, R. I.; for copies of schedules apply to navy pay office nearest navy-yard.

Piping.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on water pipe and gas pipe for school.

Piping.—Washington Oil Co., J. H. Craig, Engr., Skiatook, Okla.—Prices on piping, from time to time, for gas and oil developments.

Piping.—See Oil Well Supplies, Oklahoma City, Okla.

Flow Parts.—P. B. McCoy, Columbia, S. C.—Data on parts for garden plows: wheels, points and handles (wood.)

Plumbing.—E. S. Ligon, Prest., Blackstone Academy, Blackstone, Va.—Prices on plumbing for \$40,000 school building.

Plush.—Roby Canning & Polishing Machine Corp., Staunton, Va.—Prices on car plush.

Power Plants.—Washington Oil Co., J. H. Craig, Engr., Skiatook, Okla.—Prices on power plants for gas and oil developments.

Pump.—Selma Cotton Mill, Selma, N. C.—Feed water pump; power driven; 4x6; triplex; 3 cylinders.

Pumps.—Templeman's Milling & Canning Co., R. L. Parker, Mgr., Templeman Crossroads, Va.—Prices on pumps.

Pump.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish duplex fire pump, 500 gals. per minute (Underwriters' type), schedule 6656; delivery Fort Lafayette, N. Y.; for copies of schedules apply to navy pay office nearest navy-yard.

Pumping Machinery.—Electrical Utilities Exchange, 352 Bee Bldg., Omaha, Neb.—Prices (for customer in Eastern State) on pumping engine of 3,000,000 to 3,500,000 gals. capacity for 24 hours, steam pressure 90 lbs., water pressure 100 to 135 lbs.; must be condensing, surface condensing preferred.

Punch and Shear.—Box 194, Savannah, Ga.—Combination punch and shear; single or double end, throat not less than 24-in., capacity 1-in. hole, ¾-in. plate, with or without architectural jaw. Send cut and full description.

Rails.—S. H. Baker, Box 884, Richmond, Va.—Prices on 5 mi. 30-lb. relaying rails.

Rails.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on relaying rails from 40 to 50 lbs. to be used in reinforcing for school building.

Railway Materials and Supplies.—O. M. Mull, Shelby, N. C.—60-lb. steel T relaying rails for 20-mi. track; locomotives, cars and other equipment for short line railroad; can use good second-hand.

Railroad Frogs, Bolts, etc.—McEwen Lumber Co., Azalea, N. C.—Quotations on 4 to 6 second-hand railroad frogs for 50-lb. relaying rail; also prices on bolts, angle bars and spikes for same rail.

Reinforcing.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on T iron for reinforcing for school building.

Road Rollers.—Eastern Railway Supply Co., 413 American Bldg., Baltimore, Md.—Four 10-ton steam road rollers.

Road Construction.—Howard County Commrs., M. J. Sullivan, Clerk, Ellicott City, Md.—Bids until Apr. 28 to construct section of State-aid highway along road known as Lawyers' Hill, distance of 1.72 mi., 1 mi. of road to be built on relocation; plans and specifications at office State Roads Com., Garrett Bldg., Baltimore, Md.

Road Construction Supplies.—Berkeley & Schmidt, Richmond, Va.—Mules, harness, wagons, wheel and drag scrapers, plows, road machines, combination road rollers and traction engines and small hand tools, dynamite, cement, vitrified and iron pipe, piles, gravel and sand; in connection with constructing 32 mi. road.

Road Construction.—Road Commrs. of Dist. No. 1, Hill County, Hillsboro, Tex.—Bids until Apr. 29 to construct 25 mi. bituminous-bound rock and gravel roads; J. D. Stephenson, County Judge.

Road Construction.—Chilton County Commrs., Clanton, Ala.—Bids until May 9 to grade and drain part of Birmingham and Montgomery Rd. between Clanton and Mountain Creek; W. S. Keller, State Highway Engr., Montgomery, Ala.

Road Construction and Materials.—Harris County, H. L. Washburn, County Auditor, Houston, Tex.—Bids until May 4 for the following: 8500 cu. yds. gravel for construction of 6½ mi. paving on Alameda Rd., f. o. b. cars Myrtle and Alameda; for hauling and placing 8500 cu. yds. gravel thereon and grading same; also 10,400 cu. yds. shell and placing same on Alameda Rd.; 5600 cu. yds. shell, f. o. b. cars Cypress, for paving Cypress and Rose Hill Rd.; for grading 3 mi. Cypress and Rose Hill Rd., hauling, spreading and rolling material, either shell or gravel, county to furnish material on cars at Cypress, road to be 12 ft. wide; 1600 cu. yds. road gravel, f. o. b. cars Eureka, for constructing 1 mi. White Oak Rd.; for grading 1 mi. of road, hauling and placing gravel thereon; 1700 cu. yds. gravel, paving road past Hildebrandt school, delivery to be f. o. b. cars, points directed by engineer as per specifications; for hauling and placing 1700 cu. yds. gravel for distance of 1 mi.; 8200 cu. yds. shell, f. o. b. cars at Sellers on International & Great Northern R. R., for paving extension of East Montgomery Rd.; also hauling and placing 8200 cu. yds. shell on grading 4.3 mi.; Howe & Wise, Engrs.

Road and Street Work.—Maryland State Roads Com., O. E. Weller, Chmn., 601 Garrett Bldg., Baltimore, Md.—Bids until May 5 to construct 5 sections State highway, about 18.40 mi.: Baltimore city, .51 mi. sheet asphalt and Belgium block on Hanover St., from Lee to Baltimore Sts.; filling in concrete bridge over Gwynn's Falls along Frederick Rd.; Charles county, 4.43 mi. gravel, from La Plata to Bel Alton; Garrett county, 2.75 mi. macadam or concrete between Noyes and Accident; 7 mi. macadam resurfacing between Accident and Keyser; Montgomery county, 3.71 mi. macadam or concrete, from King's Valley to Claggettville; amounts approximate; plans and specifications on application and payment of \$1 for each contract.

Roofing.—See Building Materials.

Roofing.—See Building Materials.

Roofing (Metal).—Southwestern Cotton Oil Co., Oklahoma City, Okla.—Prices on 400 squares 26-gauge metal roofing.

Roofing, Caps, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish 84 squares asbestos and asphalt roofing material, schedule 6655; delivery U. S. N. P. Depot, Lake Denmark, Morris county, N. J.; 200,000 priming caps, 100 lbs. 5 mils. grade 3 uncut sheet mica and 10,000 ft. 2 mils. diam. Iridium platinum wire, schedule 6655; delivery Newport, R. I.; 50,000 lbs. red dry lead, schedule 6661; delivery Pier 48, New York; for copies of schedules apply to navy pay office nearest navy-yard.

Sand.—See Paving Materials, Jacksonville, Fla.

Safe.—E. C. Price, Horse Cave, Ky.—Prices on iron safe for jewelry store.

Sawmill Machinery.—Templeman's Milling & Canning Co., R. L. Parker, Mgr., Templeman Crossroads, Va.—Prices on sawmill machinery.

Sawmill (Band).—Anthony S. Hill, Randolph Bldg., Memphis, Tenn.—Second-hand 8-ft. band mill complete for use in Arkansas; give dealers' prices.

Sewers.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Apr. 27 to construct sanitary sewers on Milby St.—Baker St. to Willard St., and Willard St.—Milby St. to Whitney St.; E. E. Sands, City Engr.

Sewers.—E. B. Bonney, City Secy., Houston, Tex.—Bids until Apr. 30 to construct sanitary sewers on Bagby St. from McKinney Ave. to Rusk Ave., and Brazos St. from Walker Ave. to Rusk Ave.; also 15-in. connection from Eastwood sanitary sewer to McKinney Ave.; E. E. Sands, City Engr.

Sewers.—Pulaski County, Gordon N. Peay, Commr. of Public Bldgs., Little Rock, Ark.—Bids until Apr. 28 to construct sewer from Pulaski county courthouse annex to river; plans and specifications at office of Geo. R. Mann, Little Rock.

Sewer.—J. E. Cassidy, Mayor, Lexington, Ky.—Bids until Apr. 28 to construct public sanitary sewer on Pratt Ave. from manhole in 6th St. to a point in Pratt Ave., about 575 ft.; 8-in. pipe with 5-in. connection to curb line with two manholes.

Sewer System.—W. E. DeLamar, City Secy., Henderson, Tex.—Invites prices, specifications, etc., on construction and operation of sewer system complete.

Sewer Construction.—City of Sulphur, Okla.—Lets contract May 2 (postponed date) to construct about 60,000 ft., mainly 6-in. sewer; H. V. Hinckley, Consult. Engr., 1018 N. Harvey, Oklahoma City, Okla.; A. V. Avery, Fin. Secy. (Further description April 9.)

Shafting and Pulleys.—Selma Cotton Mill, Selma, N. C.—Shafting and pulleys.

Sprinkler Heads.—Selma Cotton Oil Mill, Selma, N. C.—Sprinkler heads.

Sprinkler System.—Heitman-Evans Co., Fort Myers, Fla.—Addresses of manufacturers relative to installation of overhead sprinkling fire extinguisher system.

Shears.—Raleigh Iron Works Co., Raleigh, N. C. (for customer).—Second-hand splitting shear; capacity up to ½-in. sheets; no objection to punching arrangement; Henry Pells type, H B-14 or H B L-14 preferred.

Showcases, etc.—E. C. Price, Horse Cave, Ky.—Prices on showcases and tables for jewelry store.

Showcases.—Smith & McGuire, Horse Cave, Ky.—Prices on showcases.

Stationery, etc.—Board of Awards, John Hubert, Acting Prest., Baltimore, Md.—Bids until Apr. 29 to furnish School Commissioners with stationery and other supplies; specifications at office Commrs.

Steam Shovel.—Bastion Brick Co., Houston, Va.—Steam shovel; second-hand, good order preferred.

Steel.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish 5 tons medium class steel angles, miscellaneous lot miscellaneous steel angles, 20 tons half-round, etc., steel bar, miscellaneous lot steel beams, 134 tons miscellaneous steel flat bars, 788 tons miscellaneous steel channels, miscellaneous lot miscellaneous steel plates, 68 tons medium rectangular and straight taper form steel plates, miscellaneous lot miscellaneous steel plates, 2 tons miscellaneous steel shapes, miscellaneous galvanized sheet steel, 9 tons black steel sheet, schedule 6662, delivery Boston, Mass., and Philadelphia, Pa.; 54,000 lbs. miscellaneous steel bar, schedule 6668, delivery Boston, Mass.; miscellaneous steel plates and 2000 lbs. black sheet steel, schedule 6668, delivery Charleston, S. C.; 57,600 lbs. miscellaneous medium steel I beams, 8660 lbs. miscellaneous steel channels, 11,750 lbs. ½x38x144-in. medium steel plates, schedule 6667; 18,000 lbs. black sheet steel, schedule 6654, delivery Washington, D. C.; 2000 lbs. black sheet steel, schedule 6668, delivery Charleston, S. C.; for copies of schedules apply to navy pay office nearest navy-yard.

Steel Forging.—U. S. Engr. Office, S. V. Roessler, Col. Engrs., 707 Army Bldg., New York.—Bids until May 8 to furnish steel forgings for Philippine Islands. Information on application.

Stone.—M. E. Worrell, Murfreesboro, N. C.—Prices on two cars broken stone; delivery Tunis, N. C.

Stone.—See Paving Materials, Jacksonville, Fla.

Stone Cutters.—Geo. Sykes Co., 314 E. 34th St., New York.—Correspondence with stone contractors relative to cutting 35,000 cu. ft. soft native (Miami) limestone, required for ashlar, window trimmings, cornices, etc., for residence at Miami, Fla., the company to quarry the stone and deliver it on site in slabs or blocks as required.

Stone-working Machinery.—Bromide Oolitic Stone Co., Bromide, Okla.—Stone crusher, 25 to 50 cars capacity; pulverizer, 20 to 50 tons daily; two stone planers; stone rubbing bed.

Stoves (Gas).—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on gas stoves for heating and cooking for school.

Structural Steel.—Navy Dept., Bureau of Yards and Docks, W. M. Smith, Acting Chief, Washington, D. C.—Indefinitely postponed opening bids (lately noted received until May 9) for structural steel for marine railway, Naval Sta., Pearl Harbor, Hawaii; Spec. No. 2066.

Structural Steel.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until May 12 to furnish and erect structural steel work required for decking sections of Quay wall for Balboa Terminal Docks; blanks and general information relating to this circular (No. 846) may be obtained from this office or offices of assistant purchasing agents, 21 State St., New York; 614 Whitney Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Tubes, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 12 to furnish 58,300 lbs. seamless drawn condenser tubes, composition A ½ in. O. D., 13 ft. 2¼ in. long, schedule 6674, delivery Norfolk, Va.; miscellaneous lot steel tubing, schedule 6682, delivery Brooklyn, N. Y.; for copies of schedules apply to navy pay office nearest navy-yard.

Tubes, etc.—Navy Dept., Bureau of Supplies and Accounts, T. J. Cowie, Paymaster-Gen., Washington, D. C.—Bids May 5 to furnish 600-O. D. 4-in. boiler tubes, 18 in. long and 134 thick, schedule 6652, delivery Brooklyn, N. Y.; 30,000 unannealed brass tubes, schedule 6654, delivery Newport, R. I.; for copies of schedules apply to Navy pay office nearest Navy-yard.

Tanks.—Southland Seminary Endowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on water tanks for storage supply of water for school.

Telephone System.—Office of F. E. Skinner, Treas., Southern Branch N. H. D. V. S., National Soldiers' Home, Va.—Bids until May 4 to remodel telephone system.

Tile.—See Building Materials.

Tiling, etc.—Southland Seminary En-

(Continued on Page 76.)

Merchants-Mechanics National Bank

South and Water Sts. BALTIMORE MD
DOUGLAS H. THOMAS President.
JNO. B. RAMSAY V-P and Chm. Bd of Dir
WM. INGLE Vice-President.
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REALTY DEPARTMENT has sites for manufacturing industries. Modern Methods of management of property.
J. ERNEST SMITH, President and Gen. Counsel.
WM. G. TAYLOR, Vice-Pres. and Treasurer.
HARRY W. DAVIS, Vice-Pres. and Secretary.
W. W. PUSEY 2d, Title and Real Estate Officer.

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Hopkins Place, German and Liberty Streets
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Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

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Fidelity and Deposit Company of Maryland

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Temporary Loans Arranged on Such Collateral.

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Dec. 31, 1913, 11,103,234.69

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J. R. WALKER, "

dowment, Inc., 400 Home Security Bldg., St. Petersburg, Fla.—Prices on tile floor and roof, hollow tile, drainage tile and cement for school.

Unloading Machinery.—Rule Cotton Oil Co., Rule, Tex.—Unloading machinery for seedhouse.

Water-works (Isolated).—John H. Gardner, Salyersville, Ky.—Prices on water fixtures to supply house.

Water Mains.—City of Columbia, S. C.—Bids until Apr. 29 to furnish material and construct or lay water mains with suitable appurtenances in Gist, Elmwood and Bull Sts., in accordance with plans and specifications by P. C. Wyse, Engr.-Supt.

Well Drilling.—John I. Moore, City Clerk, Dexter, Mo.—Bids until Apr. 28 to drill well; specifications at office of City Engr.; Frank L. Wilcox, Engr., Syndicate Trust Bldg., St. Louis, Mo.

Well Drilling.—Roy Strickland, City Clerk, Charleston, Mo.—Bids until Apr. 27 to drill well; 100 to 250 ft. deep; plans and specifications at office of Frank L. Wilcox, Engr., Syndicate Trust Bldg., St. Louis, Mo.

Wheels (Go-cart).—P. Eshman, 510 Silver St., Marion, O.—Addresses of manufacturers of go-cart wheels.

Wiring.—E. S. Ligon, Blackstone Academy, Blackstone, Va.—Prices on wiring for \$40,000 school building.

Wire Cloth.—Navy Dept., Bureau of master-Gens., Washington, D. C.—Bids May 12 to furnish 90 sq. ft. wire bronze May 12 to furnish 90 sq. ft. wire bronze cloth, 1 ft. wide, 3 ft. long, and 30 and 200 mesh, schedule 6673, delivery Newport, R. I.; miscellaneous lot wire screen cloth, 30 in. wide, silver finish, 100-ft. rolls, schedule 6673, delivery Indian Head; for copies of schedules apply to navy pay office nearest navy-yard.

Wire Fence, etc.—Harris County, H. L. Washburn, County Auditor, Houston, Tex.—Bids until May 4 to furnish material for wire fence to surround 25-acre tract, South Houston Juvenile School; also cedar posts necessary for stringing wire fence; plans and specifications at office of County Judge.

Wire Screen Partitions.—See Metal Furniture, etc.

Woodworking (Spindle) Machinery.—Malone Furniture Co., C. J. Faulk, Mgr., Dothan, Ala.—Data and prices on machinery to manufacture wood spindles used in cotton mills.

Wrapping Machinery.—Hazard Wholesale Baking & Supply Co., C. D. Halliday, Secy.-Treas., Hazard, Ky.—Bids May 30 to install wrapping machine. (See Bakery Equipment.)

FINANCIAL NEWS

Regional Bank Map.

N. W. Halsey & Co., bond dealers, La Salle and Adams streets, Chicago, have issued an excellent map of the United States showing thereon the Federal Reserve Bank districts and the 12 cities in which the regional banks will be located, according to the committee report recently made public at Washington.

FINANCIAL CORPORATIONS

Ala., Thomaston.—Planters' Bank & Trust Co. chartered; capital \$15,000; C. B. Thomas, Pres.; E. G. Thomas, 1st V.-P.; W. B. Harrell, 2d V.-P.; C. C. Prichett, Cash. Business is to begin May 15 or June 1.

Fla., Daytona.—Conversion of the People's State Bank into the First National Bank is approved; capital \$50,000.

Fla., Punta Gorda.—First National Bank of Punta Gorda is chartered; capital \$25,000; D. L. Skipper, Pres.; D. N. McQueen and C. A. Skipper, V.-Ps.; W. R. DeLoach, Cash.; W. W. Gillette, Asst. Cash. Business has begun. This is a conversion of the Merchants' Bank of Punta Gorda.

Ga., Ellijay.—Bank of Ellijay has made application for charter; capital \$25,000. Incorporators: Sam Tate and R. L. McLean of Pickens county and E. T. Hudson of Gilmer county.

Ga., Rentz.—Rentz Banking Co. chartered; capital \$25,000. Business is to begin about May 10. Officers not yet elected. A. W. Davidson is one of the incorporators.

Ga., Swainsboro.—A new bank is reported being organized by Dr. J. Leon Bell.

Ky., Stone.—First National Bank has made application to organize; capital \$25,000.

La., Bogalusa.—Washington Bank & Trust

Co. is organized with \$50,000 capital, business to begin Apr. 27.

Miss., Itta Bena.—First Savings Bank chartered; capital \$15,000; organizers, A. Robinson and U. Ray, Itta Bena, and Mrs. M. V. Jones of Highlandale, Miss. Business is to begin in about 30 days. This bank is to be run in connection with the Bank of Itta Bena.

Mo., Cabool.—Cabool National Bank has changed its name to the First National Bank of Cabool.

Mo., Pacific.—Farmers & Merchants' Bank is organized with L. P. McHugh as Cash.

N. C., Charlotte.—Southern Mutual Furniture Fire Insurance Co., chartered, began business Apr. 15. Directors: W. T. McCoy, Pres.; Charlotte, N. C.; W. M. Waters, V.-P.; Florence, S. C.; Jas. T. Porter, Treas.; Charlotte; Jno. A. Gilmore, Secy.; Charlotteville, Va.; A. W. Litschgi, Jr., Charleston, S. C.; C. W. Parker, Charlotte, N. C.; R. B. Chance, Charlotte, N. C.; S. P. Jones, Richmond, Va.

N. C., Greensboro.—Home Building and Loan Assn. has organized with following directors: E. P. Wharton, Pres.; J. J. Stone, V.-P.; N. G. White, Secy.-Treas.; R. D. Douglas, Atty.; J. R. Hughes, J. R. Donnell, J. P. Sanders, O. L. Grubbs, J. A. Kleemer, W. M. Combs, J. A. Odell, N. G. White and H. R. Bush.

N. C., Hillsboro.—Farmers and Merchants' Bank, capital \$10,000, expects to begin business in about 30 days; directors, W. H. McDade, A. G. Mitchell, R. D. Bain, Chas. G. Rosemond, O. J. Forrest, W. R. Rolands, Henry Walker, Theo. E. Sharen, N. W. Brown, Justin Bowen, J. B. Mason, Will Jordan, John Hawkin, Arthur Cole and John T. Johnson.

Okla., Ada.—Merchants and Planters' National Bank of Ada is chartered; capital \$50,000; C. H. Rives, Pres.; H. P. Reich, Cash. This is a conversion of the Merchants and Planters' State Bank of Ada.

Okla., Afton.—Farmers' State Bank, capital \$15,000, is inceptd. by G. O. Shepherd, Geo. W. Reeves, Afton; J. H. Hastings, Bernice.

Okla., Kiowa.—People's National Bank is to be chartered to succeed the Farmers' State Bank; capital \$25,000; surplus \$2,500. Directors: T. D. Edwards, Pres.; D. G. Lacy and S. G. Bryan, V.-Ps.; R. E. Wilson, Cash.; H. P. Wand.

Okla., Tulsa.—Southwest Mortgage & Investment Co. chartered; capital \$25,000; incorporators, Schuyler C. French, E. C. Martin, Tulsa; E. H. McFarland, Dallas, Tex.

S. C., Columbia.—United Trust Co. inceptd. capital \$25,000; incorporators, Ernest G. Cook and D. L. Coon. Business is to begin at once. (Previous item gave name as United States Trust Co.)

S. C., Conway.—People's National Bank is approved; capital \$25,000. Organizers: D. A. Spivey, J. A. McDermott, A. T. Colons, J. C. Spivey and G. B. Jenkins.

S. C., Conway.—Conway National Bank is approved; capital \$100,000; organizers, W. A. Freeman, W. B. Scarboro, D. V. Richardson, A. C. Thompson and W. L. Buck. This succeeds the First National Bank of Conway, the Conway Savings Bank and Bank of Horry.

S. C., Cooper.—Cooper Bros. Investment Co., commissioned; capital \$30,000; petitioners, H. M. Cooper, T. M. Cooper and J. F. Cooper.

S. C., Georgetown.—Serial Building and Loan Assn. is chartered; capital \$50,000; Holmes B. Springs, Pres.; Joseph Schenk, V.-P.; E. V. Emerson, Secy. and Treas.

Tenn., Cookeville.—Putnam County Farmers' Mutual Fire Insurance Co. chartered; capital \$50,000. Inceptrs.: B. F. Painter, J. N. King, B. C. Huddleston, M. T. Farris and H. D. Whitson.

Tenn., Memphis.—Conversion of the Mississippi Valley Bank & Trust Co. into the Mississippi Valley National Bank is approved; capital \$300,000.

Tex., Dallas.—Central State Bank & Trust Co., capital \$200,000, will begin business at 1403 Main St. in about 90 days. L. L. Henderson, Pres.; C. G. Gillespie and W. E. Easterwood, V.-Ps.; H. M. Hardie, Cash.; Fred Kelly, Asst. Cash.

Tex., Harwood.—First State Bank of Harwood, recently authorized to do business with \$10,000 capital, has organized with Dr. L. G. Dexter, Pres. and F. Jansen, Cash.

Tex., Houston.—Houston Building and Loan Association, inceptd., capital \$50,000, began business Apr. 1 at 212 Main St. Directors: Lucian R. Carroll, Pres.; F. T. Heideberg, V.-P.; J. W. Hertford, Treas.; R. C. George, Secy.; Jeff N. Miller.

Tex., Palestine.—Regarding the Merchants' Building and Loan Assn., reported char-

tered, A. L. Bowers writes: "This was a mistake; did not organize. (See Manufacturers Record, Apr. 9.)"

Tex., San Saba.—San Saba Building and Loan Association, capital \$50,000, was chartered Sept. 24, 1890; State permit granted Mech. 28, 1914. T. C. Henry, Pres.; John Seiders, Secy.-Treas.; N. C. Walker, Atty.

Tex., Winfield.—Winfield Loan and Building Association chartered; capital \$100,000. Inceptrs.: S. D. Nelson, O. W. Caudle and G. W. Tallaferra.

Va., Berkeley.—Industrial Savings & Loan Co. inceptd.; capital \$500,000; C. D. Colonna, Pres.; J. A. Market, Secy.

Va., Martinsville.—Martinsville Building and Loan Assn. inceptd.; capital \$1000 to \$50,000; T. G. Burch, Pres.; S. C. White, Jr., Secy.

Va., Norfolk.—Norfolk Aid & Investment Corp. chartered; capital \$1000 to \$10,000; J. A. Handy, Pres.; Walter Smith, Secy.

Va., Norfolk.—Union Trust & Title Corp. has decided to change its name to the Guaranty Trust & Title Corp. and increase capital \$300,000. Directors: L. W. Davis, James L. McLemore, W. R. Martin, W. T. Old, J. L. Hulard, George W. Roper, M. T. Friary, W. W. Moss, R. M. Hughes, Jr., W. L. Williams and Walter H. Taylor.

Tex., Wichita Falls.—Wichita Falls Building and Loan Assn. chartered; capital \$500,000; incorporators, J. A. Kemp, R. E. Huff, T. J. Taylor and others.

W. Va., Bluefield.—Mutual Savings & Loan Co., capital \$200,000, is chartered; incorporators, J. S. Hall, H. A. Lilly, H. P. Musser, R. E. Rindard and J. F. Boone and others.

NEW SECURITIES

Ala., Atmore.—\$20,000 5 per cent. 25-year water-works bonds voted last Nov. were recently purchased by J. B. McCrary Co., Atlanta; denomination \$500; dated Jan. 2, 1914.

Ala., Birmingham.—City Commissioners have passed an ordinance providing for the issuing of \$200,000 5 per cent. 30-year public auditorium bonds voted last Nov. Address The Mayor.

Ala., Lanett.—Bids will be received until May 18 for \$12,000 5 per cent. 30-year school bonds; R. W. Jennings, Mayor.

Ala., Montgomery.—Election to vote on \$250,000 of bonds to pay off outstanding indebtedness of the city will be held June 11. Address City Commrs.

Ala., Ozark.—\$25,000 water and light bonds are voted. J. A. Eason is Mayor.

Ala., Phenix City (P. O., Columbus, Ga.).—The report that city has voted \$15,000 of water-works bonds is erroneous, but the Board of Aldermen at its next meeting will likely order an election for this purpose; W. Moss Harrison, Mayor.

Ala., Roanoke.—\$20,000 5 per cent. 30-year sewerage bonds were recently purchased by J. B. McCrary Co., Atlanta.

Ark., Argenta.—Bids will be opened 10 A. M. May 2 for \$35,000 10-year bonds Street Improvement Dist. No. 16; interest 5, 5½ or 6 per cent. Address Justin Matthews, Secy.

Ark., Newport.—Bids will be received until 10:30 A. M. May 22 by J. R. Cox, Secy. Board of Improvement, Bridge Improvement Dist. No. 1, city of Newport, care John W. and Jos. M. Stayton, Newport, for \$24,660 6, 7½ and 5 per cent. bonds. Further particulars will be found in the advertising columns.

Fla., Arcadia.—\$200,000 bonds Punta Gorda Dist., De Soto county, have been awarded to Hoehler, Cummings & Pender, Toledo, at par, accrued interest and premium of \$575.

Fla., Port Tampa City.—Bids will be received until May 4 for \$17,000 6 per cent. 20-year improvement bonds. Address City Treas.

Fla., Ocala.—Election is to be held in June to vote on \$400,000 public library, city hall, fire station, sewerage, paving and water bonds. C. W. Hunter is Pres. City Council.

Fla., Ojus.—Election is to be held May 11 to vote on \$12,000 6 per cent. bonds Ojus Special Tax School Dist. No. 13, Dade county; dated July 1, 1914; maturity \$1000 July 1, 1924, and \$1000 annually thereafter; R. E. Hall, Supt. County Board Public Instruction.

Fla., Orlando.—Bids will be received until noon May 12 by M. O. Overstreet, Chrmn. Board of Commrs. of Orange County, for \$600,000 5 per cent. 30-year road bonds; dated June 1, 1914.

Fla., Pensacola.—Bids will be received until noon June 15 for \$400,000 4½ per cent. 30-year dock and belt railway bonds; denomination \$1000; dated Oct. 1, 1913; maturity Oct. 1, 1913; A. Greenhut, Mayor.

Fla., St. Augustine.—Bids will be received until 10 A. M. May 11 for \$50,000 5½ per cent. St. John's county road bonds; dated May 1, 1914; maturity May 1, 1914. Address County Commrs., St. John's county, care W. Wallace Snow, Clerk, St. Augustine. Further particulars will be found in the advertising columns.

Ga., Arlington.—\$16,000 5 per cent. sewerage system installation bonds have been purchased by J. B. McCrary Co. of Atlanta; denomination \$1000; dated Jan. 1, 1914.

Ga., Chickamauga.—Bids will be received until 11 A. M. May 11 for \$15,000 5 per cent. 30-year bonds. Address Tom W. Lee, Mayor.

Ga., Pelham.—\$30,000 of bonds are voted for following purposes: School building, \$16,000; street improvements, \$4000; extension of sewerage, \$1000; extension of water and light system, \$4000; fire department and jail, \$5000. Address The Mayor.

Ga., Whigham.—\$800 of bonds have been purchased by Farmers' State Bank of Whigham at a premium of \$200. Address Town Clerk.

Ky., Cynthiana.—Election will be held July 7 to vote on \$15,000 school bonds. Address The Mayor.

Ky., Elizabethtown.—The \$23,000 school bonds voted Mech. 23 will run 1-23 years; interest either 5 or 6 per cent.; denomination \$1000. Bids for same will be opened Apr. 27. Address Horace Hay, Treas. District School Trustees.

Ky., Newport.—\$50,000 4 per cent. 30-year refunding bonds have been sold to local banks as follows: German National Bank, \$30,000; Central Savings Bank, \$10,000; Citizens' Commercial and Savings Bank, \$10,000; dated May 1, 1914; maturity May 1, 1934; Chas. D. McCrear, Commr. of Finance.

La., Abbeville.—\$72,500 5 per cent. 1-10-year road-construction bonds were purchased on Apr. 15 by Bank of Abbeville at 98½ or at par, less \$1087.50 for commission, etc.; denomination \$500; dated May 1, 1914. O. Bourque is Pres. and A. O. Landry Secy. Police Jury.

La., Amite.—\$75,000 5 per cent. bonds Road Dist. No. 2, Tangipahoa parish, are being offered at private sale, all bids received for same Apr. 13 having been rejected; H. P. Mitchell, Dist. Pres.

La., Baton Rouge.—\$186,000 5 per cent. bonds Road Dist. No. 2, East Baton Rouge parish, were voted Apr. 11; denomination \$1000; maturity Feb. 1, 1915, to Feb. 1, 1941. Bonds will be sold by Pres. of Police Jury at not less than par; P. A. Woods, Secy. Police Jury.

La., Melville.—Election to vote on \$15,000 electric-light bonds is to be held May 12, and not May 2 as previously reported. Lester J. Williams, M.D., is Mayor.

La., Walker.—Bids for \$1000 5 per cent. 10-year drainage bonds will be received May 16. C. A. Ranney, village clerk.

Md., Baltimore.—Bill authorizing an issue of \$3,000,000 sewerage bonds is signed by the Governor. Address J. H. Preston, Mayor.

Md., Cumberland.—Election will probably soon be held to vote on \$150,000 5 per cent. 10-year street bonds. Address Mayor Koon.

Md., Elkton.—Commrs. Cecil County have ordered the issuing of \$25,000 road bonds.

Md., Kensington.—Governor has signed bill providing for bond issue. Address The Mayor.

Md., Mt. Airy.—Election is to be held first Monday in May to vote on \$20,000 water-works and other improvement bonds. Address The Mayor.

Md., Towson.—Bill providing for sewerage loan, Baltimore county, is signed by Governor. Address County Commrs.

Miss., Gulfport.—Board of Supervisors, Harrison county, proposes to issue \$15,000 of bonds for Mississippi City Rural School Dist.

Miss., Greenville.—On May 1 Board of Mississippi Levee Commrs., C. R. Smith, Pres., proposes to issue \$50,000 of an issue of \$300,000 6 per cent. certificates of indebtedness. L. Pink Smith is Secy. and Treas.

Miss., Hazlehurst.—Bids will be received by Board of Supervisors of Copiah county until 2 P. M. May 4 for \$50,000 6 per cent. road bonds Supervisors' Dist. No. 2. B. Shelton, Chancery Clerk. Further particulars will be found in the advertising columns.

Miss., Jackson.—Bids will be received until noon May 20 for \$1,250,000 4½ per cent. Mississippi State bonds. Address Governor Earl Brewer or State Treasurer P. S. Stovall. Further particulars will be found in the advertising columns.

Miss., Kosciusko.—\$50,000 5 per cent. 5-20-year Attala county funding bonds were

awarded to John Nuveen & Co., Chicago, Ill., at par and \$70,000 premium, they to furnish bonds, attorney's fees and other expenses up to and including the delivery of the bonds to the county; J. H. Oliver, Clerk Chancery Court and ex-officio Clerk Board of Suprs. Attalla County.

Miss., Lexington.—\$75,000 6 per cent. 25-year Holmes county funding bonds have been sold. P. H. Murphy is Clerk Board of Supervisors.

Miss., Meridian.—School bonds are to be offered for sale Apr. 27. J. W. Parker is Mayor.

Miss., Meridian.—Hoehler, Cummings & Prudden, Toledo, O., purchased at par, purchaser paying for lithographing and attorney's fees and passing on legality of issue, and interest to date of delivery, \$100,000 5½ per cent. bonds Suprs. Dist. No. 1, Lauderdale county; denomination \$500; dated Mch. 1, 1914; W. R. Pistole, Clerk Chancery Court.

Miss., Vicksburg.—Bids will be received until 5 P. M. May 4 by A. M. Paxton, City Clerk, for \$400,000 5 per cent. 20-year water-works bonds. Denomination \$1000. Dated May 1, 1914.

Miss., Weir.—\$5000 6 per cent. 10-19-year agricultural high school site purchase bonds have been sold at 100.30 to H. C. Speer & Sons Co., Chicago. Denomination \$500. Dated July 1, 1914.

Mo., Booneville.—\$65,000 5 per cent. 10-20-year school district building bonds were purchased by Mercantile Trust Co., St. Louis, at a premium of \$2191.50.

Mo., Chillicothe.—An election is to be held May 4 to vote on \$100,000 5 per cent. 20-year water bonds. W. L. Wannamaker is City Clerk.

Mo., California.—\$30,000 5 per cent. 20-year school bonds were purchased Apr. 15 by Mercantile Trust Co., St. Louis, Mo., at 100.50; denomination \$500; dated Apr. 1, 1914; maturity 1934; Lashley M. Gray, Secy. School Board.

Mo., Union Star.—\$100,000 building bonds are voted by Union Star School Dist., De Kalb county. Address Dist. Commrs.

Mo., Unionville.—\$10,000 building bonds Unionville School Dist., Putnam county, are voted. Address Dist. Commrs.

N. C., Beaufort.—\$10,000 5 per cent. 30-year bonds for improving Taylor's Creek and one-third of Coats have been purchased at par by Bank of Beaufort and Beaufort Banking & Trust Co.; denomination \$1000; dated May 1, 1914; maturity 1944. C. H. Bushall is Town Clerk.

N. C., Greensboro.—Steps are being taken to call an election to vote on \$100,000 street bonds. Address The Mayor.

N. C., Lillington.—\$15,000 Lillington township, Harnett county, road bonds are voted. Address Township Road Commrs.

N. C., Lillington.—Black River township, Harnett county, will vote June 10 on \$25,000 road bonds. Address County Commrs., Lillington, N. C.

N. C., Raleigh.—\$100,000 5 per cent. 30-year street, sewer and fire-station bonds are voted. Address The Mayor.

N. C., Statesville.—Election is to be held June 16 to vote on \$25,000 school-building bonds. Address The Mayor.

N. C., Statesville.—\$30,000 5 per cent. 30-year street-improvement bonds are purchased by Cutter, May & Co., Chicago, paying a premium of \$35 and expenses, including attorney's fees.

Okla., Bristow.—Election is to be held May 1 to vote on \$16,000 additional to amount already voted (\$20,000) for sewers. Address The Mayor.

Okla., Boswell.—Bonds for water-works were recently voted. Address The Mayor.

Okla., New Cordell.—Bids will be received until 7.30 P. M. May 4 for \$55,000 6 per cent. 10-25-year water-works bonds; bids to be conditioned on the result of an election to be called on or before Aug. 25, 1914, for the purpose of voting such bonds. Address J. Reid, City Clerk. Further particulars will be found in the advertising columns.

Okla., Tulsa.—\$500,000 5 per cent. 20-year school-building bonds have been purchased by First National Bank of Tulsa at 100.5302. R. S. Fellows, Secy. Board of Education.

S. C., Allendale.—H. T. Holtz & Co., Chicago, have been awarded at \$15,017 and interest \$15,000 bonds Allendale School Dist. No. 22.

S. C., Cades.—Bids are being received by Bank of Cades, V. G. Arnett, V. P., for \$5000 6 per cent. 20-year school district building bonds School Dist. No. 25, Williamsburg county, voted Mch. 28.

Tenn., Athens.—Bids will be received until 1 P. M. May 11 for \$30,000 5 per cent. 30-year city bonds to take up floating indebtedness and for improvement purposes. Address The Mayor and Recorder.

Tenn., Blountville.—Bids will be received until 1 P. M. May 21 for \$100,000 5 per cent. 20-30-year Sullivan county road-improvement bonds. Address W. D. Lyon, Chmn. Pike Road Commission, Bluff City, Tenn. Further particulars will be found in the advertising columns.

Tenn., Columbia.—\$75,000 5 per cent. 30-year school building and equipment bonds are voted; denominations \$500 and \$1000; J. M. Dedham is Mayor.

Tenn., Hall's.—\$25,000 6 per cent. water and light bonds are reported purchased by Stacy & Braun, Toledo.

Tenn., Oakwood (P. O. Knoxville).—\$50,000 5½ per cent. bonds recently voted are reported purchased by a Chicago firm. Address Town Commrs.

Tenn., Anderson.—\$30,000 Grimes county re-funding bonds have been purchased by Commonwealth Trust Co., Houston. Reid Rikard is County Judge.

Tenn., Austin.—Attorney-General has approved following securities: \$125,000 high-school building bonds.

Tenn., Bastrop.—Judge Sluder, San Antonio, is reported to have purchased for a bond company \$50,000 5 per cent. Road Dist. No. 1, Bastrop county, bridge and road construction bonds.

Tenn., Batesville.—Election is to be held in Zavala county May 12 to vote on road bonds. Address County Commrs.

Tenn., Big Wells.—\$20,000 school bonds are reported sold. Address The Mayor.

Tenn., Bryan.—\$12,000 street-paving bonds are voted. City will purchase own bonds unless par and accrued interest is offered by responsible parties at once. Address The Mayor.

Tenn., Cameron.—\$100,000 5½ per cent. bonds Road Dist. No. 6, Millam county, have been purchased by Sutherland, Gebde & Co., Kansas City, Mo.

Tenn., Carrizo Springs.—\$40,000 5 per cent. 40-year Dimmit county school district bonds have been purchased by Commonwealth Trust Co., Houston.

Tenn., Corpus Christi.—\$50,000 5½ per cent. 20-40-year street improvement bonds have been purchased by Sutherland, Gebde & Co., Kansas City, Mo., at par and interest.

Tenn., Corsicana.—Bids will be received by County Judge of Navarro county until 10.30 A. M. May 15 for \$75,000 of 20-40-year bonds Road Dist. No. 3, Navarro county; dated Sept. 1, 1913; denomination \$1000. H. D. Johnson, County Auditor. Further particulars will be found in the advertising columns.

Tenn., Elkhart.—\$8000 school-building bonds voted Apr. 4 are 40-year 5 per cent.; denomination \$500; dated May, 1914. Bids for same will be opened on May 1. Address W. Nell, Prest. School Board, J. H. Hicks is Supt.

Tenn., El Paso.—Bids will be received until 11 A. M. May 11 for \$300,000 5 per cent. 10-40-year El Paso county and city joint municipal building bonds. Albert S. J. Elyar is County Judge and C. E. Kelly is Mayor.

Tenn., Franklin.—\$17,500 water-works and electric-light bonds are voted and will be placed on market as soon as record can be perfected.

Tenn., Galveston.—\$250,000 Galveston county road bonds have been purchased by City National Bank of Galveston. Address County Commrs.

Tenn., Greenville.—\$200,000 road bonds of Precinct No. 4, Hunt county, defeated. W. M. Henly is County Auditor.

Tenn., Hempstead.—J. D. Harvey, County Judge, is offering for sale \$15,000 5 per cent. 10-40-year bonds Waller County Road Dist. No. 5. Denomination \$1000. Dated Nov. 12, 1913.

Tenn., Hillsboro.—Report that city had voted \$18,000 water-works bonds is erroneous. City has not voted on such an issue, and has not even considered calling election for such purpose. M. W. Lovell, Mayor.

Tenn., Houston.—\$75,000 5 per cent. 1-20-year bonds Drainage Dist. No. 6, Harris county, are being offered. Address Dist. Commrs.

Tenn., Kaufman.—\$300,000 5 per cent. 10-40-year bonds Commrs.' Dist. No. 3 and \$150,000 bonds Justice Precinct No. 8, Kaufman county, are voted. James A. Cooley, County Judge.

Tenn., Kingsville.—\$160,000 5 per cent. 40-year Kleburg county courthouse and hospital bonds have been purchased by Commonwealth Trust Co., Houston; Ben F. Wilson, County Judge.

Tex., Marshall.—Bids will be received until noon May 14 by Geo. L. Huffman, Judge of Harrison county, for \$300,000 5 per cent. 10-40-year bonds Road District No. 1; dated Apr. 1, 1914; maturity 1954. Further particulars will be found in the advertising columns.

Tex., Mineral Wells.—\$125,000 5 per cent. 40-year high-school and street-improvement bonds have been purchased by Commonwealth Trust Co., Houston.

Tex., Palo Pinto.—\$100,000 Palo Pinto county road bonds are voted. Address County Commrs.

Tex., Rosenberg.—The Commonwealth Trust Co., Houston, is the purchaser of the \$30,000 5 per cent. 40-year water-works and street-improvement bonds recently reported sold.

Tex., Runge.—\$20,000 water-works and light bonds have been purchased by Commonwealth Trust Co., Houston; J. F. Murray, City Secy.

Tex., San Angelo.—\$50,000 5 per cent. 40-year high-school bonds are voted. Address The Mayor.

Tex., Snyder.—\$50,000 5 per cent. 40-year Scurry county road and bridge bonds were voted Apr. 11; denomination \$1000; dated Apr. 11, 1914. Date for opening bids not yet decided. C. R. Buchanan, Judge Scurry county.

Tex., Sonoma.—\$18,000 5 per cent. 40-year school district bonds have been purchased by Commonwealth Trust Co., Houston. R. M. Halbert is Secy. School Board.

Tex., Thorndale.—\$20,000 school-building bonds are voted. Address The Mayor.

Tex., Victoria.—\$125,000 of Inez district road bonds have been sold to R. P. Field of Victoria at par and accrued interest. He also has the road construction contract.

Tex., Waco.—\$1,075,000 5 per cent. 40-year bonds Road Dist. No. 2, McLennan county, were purchased by the Harris Trust and Savings Bank, Chicago.

Tex., Whitewright.—\$9000 funding and \$6000 water-works bonds are voted. Address The Mayor.

Tex., Wichita Falls.—\$25,000 5 per cent. 15-year hospital bonds have been purchased by N. L. Wagner, Wichita Falls, at par, accrued interest, necessary expenses and \$62.50 premium. J. W. Bradley is Mayor.

Tex., Wichita Falls.—\$25,000 Wichita County Hospital bonds are purchased at \$405 premium by Farson & Son, Chicago.

Tex., Woodboro.—\$9000 5 per cent. 20-40-year Woodboro district bonds are being offered for sale; denomination \$500; dated March 1, 1914. H. Cummins is Secy. School Board.

W. Va., Charleston.—Ordinance is passed by City Council providing for an election to vote on sewer and paving bonds. Address The Mayor.

W. Va., Fayetteville.—Election will probably be held June 6 to vote on \$750,000 Fayette county road bonds. Address County Commrs. S. T. Carter, Clerk.

W. Va., Parkersburg.—Election will be held May 7 to vote on \$40,000 5 per cent. 20-40-year Clay Dist., Wood county, road bonds; denomination \$100, \$500 and \$1000. W. M. Dudley is County Clerk.

FINANCIAL NOTES.

The Texas Bankers' Association will meet in annual convention at Fort Worth, Tex., on May 5, 6 and 7.

The Alabama Bankers' Association will hold its annual meeting at Decatur, Ala., on May 12, 13 and 14.

Growing a Hybrid Cotton.

A cotton grower from North Carolina employed on Panama Canal work has been conducting experiments in hybridizing the tree cotton native to Panama with the American cotton plant on a plot of ground near his quarters on the slope of Sosa Hill at Balboa. Referring to these experiments the Canal Record says:

"It is claimed that the crossing of the plants has given the new product an added tenacity as to life, has resulted in an increased production, and has improved the fiber. The spot where the experiments have been made would seem least promising for the successful growth of the plant. The ground was lacking in richness originally, and was brought up to its present high state of cultivation by the introduction of chemicals, something after the manner of the fertilization methods

employed by the cotton planters of the Southern States. The grower produced his hybrid by means of pollenization, the process having been aided to some extent by winged insects which transfer the pollen from one cotton bloom to another. Although the production is highest in the rainy season crop, the present dry season has not materially affected the plant growth; the plants have been constantly pruned down to the bare stalk, but put out new shoots at once. Hybridization has also increased the size of the bolls, actual weights showing an average of 18 bolls to the pound, whereas ordinary cotton is said to require from 70 to 80 bolls to the pound. Bolls have been produced at the Balboa experimental station weighing over an ounce.

"Another advantageous factor is that the plant in this climate will continue to produce for several seasons without replanting. The life of the native cotton tree is not exactly known, but observations extending over a period of 10 years show that the tree has invariably produced a crop, and that during the whole time there has been no appreciable difference in the output from year to year. A canal employee took a quantity of this tree cotton to the Bureau of Plant Industry in the Department of Agriculture at Washington in the year 1905. The officials of the bureau at that time had heard of this cotton, but had seen no samples. A careful analysis of it was made, with the result that the opinion was given that it compared favorably in texture and length with the American product."

Dairying in Alabama.

A the conclusion of the present tour over the Mobile & Ohio Railroad, the Southern Railway Co. announces that, in order to further encourage the development of dairying in Alabama, it will send its special "dairy instruction car" over its lines in the State for a second complete tour. Commencing at Calvert, Ala., May 12, the car will visit 58 points in all sections of the State served by the Southern Railway and Northern Alabama Railway. An entire day will be devoted to each stop, and illustrated lectures and demonstrations on improved methods of dairying will be conducted morning and afternoon by a corps of expert dairymen who will accompany the car. Last season the dairy instruction car toured practically the same territory, and the interest it aroused among dairymen and farmers at every point visited was so keen that the Southern Railway is sending it out again to follow up the work and give those who failed to attend last season an opportunity to hear the lectures and learn of the opportunities which Alabama offers to dairymen who will develop this industry and supply the great home demand for milk and butter. The car is fitted out like a complete farm dairy, and carries charts and exhibits giving complete information about dairying and its problems. Milk samples will be tested and advice given on all questions of interest to dairymen. Stops will be made at Calvert, Jackson, Whatley, Thomasville, Pine Hill, Gastonburg, Marion Junction, Hamburg, Marion, Newburn, Greensboro, Akron, Selma, Uniontown, Allenville, Demopolis, Coatsopa, Leeds, Irondale, Birmingham, Fern Bank, Millport, Kennedy, Fayette, Bankston, Berry, Corona, Oakman, Jasper, Nauvoo, Haleyville, Spruce Pine, Russellville, Tusculumbia, Leighton, Courtland, Hillsboro, Decatur, Madison, Huntsville, Gurley, Scottsboro and Stevenson.

Classified Opportunities

MEN WANTED

GOOD OPPORTUNITY is offered an experienced producer with ability to get a hearing with engineers and purchasing agents in industrial plants. This is not a salaried proposition. A man with a reasonable bank account can build a clientele with remuneration big enough to make a comfortable living within 60 days. Federal Graphite Mills, Cleveland, O.

AGENCIES WANTED

GERMANY.—We want to represent American manufacturers in Germany. H. Drawe & Co., Agents, Frankfurt a. M., Germany.

WANTED.—Accounts with manufacturers desiring representation in supplies for fruit growers for Virginia; two years' experience in fruit industry. Address No. 1490, care Manufacturers Record, Balto., Md.

SPECIALTY LINE WANTED.—I would like to secure the agency and represent some specialty concern that has an article of any kind with merit they wish to market. Address P. O. Box 789, Richmond, Va.

I AM a building material salesman of years of experience in the Virginia and North Carolina territories; am familiar with the trade and how to handle it; will be open for proposition after May 1 with a company that wants business; can furnish A-1 references. Address No. 1515, care Manufacturers Record, Balto., Md.

WANTED.—Sales agency for all lines pertaining to builders' specialties; East Tennessee as territory; can furnish satisfactory references to interested concern; modern warehouse facilities. Address Daniel Briscoe, Jr., 325-327 State St., Knoxville, Tenn.

SITUATIONS WANTED

AN AGGRESSIVE young business man, age 32, whose record shows energy and executive ability, highly efficient accountant, correspondent, credit and office man, thoroughly acquainted with mill and railroad supply business, excellent references, wishes position with capable company. Address No. 1512, care Manufacturers Record, Balto., Md.

CONTRACTING ENGINEER who can secure and manage large business desires to represent good company on salary and commission basis, preferably in South; long experience in all phases of reinforced concrete and general construction. Address No. 1513, care Manufacturers Record, Balto., Md.

WANTED.—After May 1, position as secretary or traffic manager live commercial organization in the South or Southwest; good secretary; better traffic man. Address Traffic Manager, Box No. 252, Durham, N. C.

SITUATION wanted as foreman or superintendent; has over 25 years' practical experience building macadam roads and all grading. Address Peter Kearns, 9 Prospect Ave., Summit, N. J.

WANTED.—Position as superintendent of quarry; 14 years' experience; young man with small family; an hustler and good organizer; can furnish the very best of references. Address M. B. Malone, P. O. Substation No. 2, Charlotte, N. C.

A CAPABLE executive man of large experience in both office and operative manufacturing work desires to change; preferably in the Southern States; best references. No. 1509, care Manufacturers Record, Balto., Md.

CAPITAL WANTED

CAPITAL WANTED.—A going concern, with secret formula, manufacturing fire, water, acid and alkali proof paint, easy seller, large profits, already operating on paying basis, needs \$25,000 capital to further develop business; open to proposition from right party, to be active in management, who can furnish necessary capital and good references; none other need reply. Huffman Salvage Roofing Paint Co., 1159-51 Brown-Marx Building, Birmingham, Ala.

EDUCATIONAL

RENSSELAER POLYTECHNIC INSTITUTE, T. C. G., N. Y.—Courses in Civil, Mechanical, Electrical and Chemical Engineering and General Science, leading to the degree of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Ch.E.), and Bachelor of Science (B.S.). Also special courses. Splendidly equipped new engineering laboratories. Send for catalogue to Registrar.

TRUST COMPANY WANTED

WANTED.—TRUST COMPANY.—Southern city, 20,000 people, 400,000 people radius 60 miles, wants trust company; splendid opportunity; assistance locally. Address No. 1492, care Manufacturers Record, Balto., Md.

RATES AND CONDITIONS

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 25 lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, post-office or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 18c per line, 300 lines 16c per line; 500 lines or more, 15c per line.

BUSINESS OPPORTUNITIES

WANTED.—To connect with individuals who will be willing to invest \$15,000 in a very successful graphite company in the best section in the South. The company is most successful in selling its product, and with additional capital can enjoy increased sales at a large profit. The best references can be given. Address P. O. Box 732, Atlanta, Ga.

\$100,000 WORTH of property in Somerset Co., Md., consisting of stores, farms, town and country residences, factory sites, etc., for sale, or will exchange for city property. Geo. A. Cox, Upper Fairmount, Md.

WANTED.—Money to lend on first mortgage real estate, not over 50 per cent. Its value, in this city and county at 6 per cent. net, payable semi-annually; we guarantee principal and interest when due whether collected or not. For further particulars address Greenville Real Estate Loan & Insurance Co., W. B. Anthony, Secy., Greenville, S. C. Reference: Any bank or trust company in this city.

\$16,000 BUYS 50 acres 1 mile from city limits of Jacksonville, Florida, near Seaboard Railway's big shops; high and dry and nicely located for investment or moderate priced subdivision. Terms: \$6000 cash; balance 1 and 2 years with 6 per cent. interest. Making division of partnership reasons for selling. Address Owner, Box 952, Jacksonville, Florida.

WE REQUIRE some capital to develop a tract of four hundred acres of land in Florida, on which is located a large spring, the water having been analyzed by Wiley & Co. of Baltimore and found to contain valuable mineral properties. Certain conditions make this a popular section, and we have a railroad project in connection that could be made to pay handsomely. The possibilities of the earning power of this development are unlimited, and the proposition is absolutely one of merit. We are the owners of the land and spring, and control the railroad, of which we will become the owners upon the payment of a small amount in cash and a reasonable interest in the project in payment of the balance. We are in a position to make an acceptable party an attractive proposition who can command fifty thousand dollars, for which we will give ample security, and if desired, party can become actively interested. We court the strictest investigation. References of the highest character. Address Pine Springs Development Co., P. O. Box 952, Jacksonville, Florida.

CLAY TRACT of 41 acres on Tidewater & Western R. R. at crossing of county road about one mile from Bermuda on James River, known as Eppe's Crossing. Tract has been tested over its entire surface, showing clay exists to the depth of 4 1/2 feet and covers entire property with overburden of 3 to 9 inches. The State Geologist reports as being the best found on the coastal plain, suitable for pipe, tile, pavers, fireproofing, and stiff-mud and dry-press face brick. Burns a dark cherry red, drying easily and safely.

This valuable clay bed, with a manufacturing site, at Chester, for sale reasonable. The manufacturing site, consisting of between 3 and 4 acres, is on A. C. L. R. R. at junction of Tidewater & Western R. R., affording splendid shipping facilities to North or South by A. C. L. N. & W., S. A. L. T. & W., or by water. With proper development should prove a good money-maker. Full particulars upon request. Address Central Realty Co., Richmond, Va.

AMERICAN FIRM, with foreign offices, desires to introduce meritorious patents, inventions, processes in Europe. Send particulars. K. Box 36, Station F, New York.

WE TURN real estate, residence lots or farms into cash. We are equipped in every way to promote land sales in all parts of the United States. Everything sold exclusively at auction and on commission. Write us. Our representative will inspect your property. National Real Estate & Auction Co., 1024 Woodward Bldg., Washington, D. C.

WANTED.—Contractor to log and saw into lumber 40,000,000 feet of hemlock, white pine, poplar, oak, chestnut, etc.; haul mill required; will let sawing contract alone if desired. Address S. F. Chapman, Asheville, N. C.

FOR SALE.—State rights, patent just issued, unequalled mail-order article; unlimited commercial value; no competition; big profits; millions need it. Address P. O. Box 693, Charleston, S. C.

WANTED.—Reliable party to join in securing and developing suburban property near University of Virginia; can be used profitably until subdivided and developed for dairying, trucking, poultry or pig raising. Address Box 375, Charlottesville, Va., stating amount of capital and experience you can furnish.

WANTED.—To correspond with party who would be interested in investing in and becoming connected with management of a general building and builders' supply business. Address Box 375, Charlottesville, Va., stating amount you can invest and position you can fill.

WANTED.—To correspond with parties relative to furnishing and installing a water system in town of 2500 people. Address No. 1508, care Manufacturers Record, Balto., Md.

FOR SALE.—Account owner's death, complete boiler shop, with modern equipment for all ranges of work; plant unencumbered; located on 3 trunk lines with 2 city blocks of real estate; has 30 years of successful business record. Splendid opportunity. Address W. P. McCrossin, Executor, Birmingham, Ala.

WANTED.—Correspondence with a practical brick and tile manufacturer who would be interested in buying an interest and taking the management of one of the best-equipped shale brick plants in the Southwest, using gas for fuel; distribution for the product covers a large territory; now making four distinct classes of vitrified face brick, also builders' and pavers', and will add tile, hollow brick and silo machinery; product will enter into four States; trade established; capacity now 75,000 brick per day; one of the most up-to-date plants in the Southwest; shale pit adjoining the plant that will last fifty years. A splendid opportunity for the right person. Plant located at Ft. Smith, Ark. Only plant here. Address M. C. Burke, Ft. Smith, Ark.

I WANT to hear from the board of trade of some town in Southern Virginia or Northern North Carolina in the vicinity of which there is an abundance of small pine; a town in which the business men will invest \$50,000 in a plant to manufacture this small pine into a product which will give back the investors a clean profit of \$50,000 every year. The product will be sold in Virginia and North Carolina. I have details ready to submit. Address No. 1502, care Manufacturers Record, Balto., Md.

COUNTRY HOME

\$9000 FOR handsome country place, Laurel, Md.; about one mile from town, just off Baltimore Boulevard; 3-room dwelling, with bath and all conveniences; 10 acres good cultivated land, fruit, chicken-house and runs, stables. Apply C. H. Stanley, Jr., Laurel, Md.

MODELS

MODELS MADE FOR INVENTORS.—General machine work. Designing and perfecting. Developing automatic devices and machinery. In a position to do all kinds of light tool and machine work. Prices reasonable. Estimates cheerfully given. Ideal Machine Works, 64 Ann Street, New York City.

FACTORY SITES

IDEAL MANUFACTURING SITE: extra low price; central Ala.; 35,000 acres cut-over land, with 30,000 feet long-leaf pine; 150 good 3, 4, 5 and 6-room houses; commissary, hotel, office; main line R. R. depot. Owner, 1520 16th St. South, Birmingham, Ala.

INDUSTRIES WANTED

MISCELLANEOUS

FREE SITE given for factory; electric power cheap; no city tax; 2 railroads; plenty of labor. Berkeley Land Company, Martinsburg, W. Va.

BLUEFIELD, WEST VIRGINIA, the gateway to the vast Pocahontas coal fields, and the distributing point for half a million contented laborers, needs an overall factory, needs a mine implement factory, and needs a brick plant. Address C. T. Boykin, Secretary Bluefield Chamber of Commerce.

A SMALL RAILROAD will do more to meet your requirements than a large one. The Randolph & Cumberland R. R. is in the undeveloped section of North Carolina's best region, and on this line are splendid opportunities and an open field for a woodworking plant, cannery, brick plant, cotton or hosiery mill, besides other industries. We also have splendid low-priced farm lands in our territory. Write to J. R. McConnell, Industrial Agent, R. & C. R. R., Carthage, N. C.

INDUSTRIAL PLANTS FOR SALE

ELECTRIC LIGHT PLANT

ASSIGNEE MUST SELL electric-light plant, complete, 20-year franchise, in a good location. A good factory site, with 2 large 2-story buildings, located on main line of Frio R. R.; 12 machines, used in the manufacturing of screen doors. Address L. L. Thompson, Assignee, Libourn, Mo.

BRICK AND TILE WORKS

FOR SALE.—Brick and tile works; daily capacity tiles 10,000, bricks 20,000; water transportation to principal Eastern cities; excellent opportunity for anyone who understands the manufacture of tile and brick. For further particulars address J. E. Warren, Newport News, Virginia.

ICE AND ELECTRIC LIGHT PLANT

FOR SALE.—Ice and electric-light plant in connection, in Kentucky town, 2000 inhabitants. We have franchise for water-works, and all can be operated together at low cost. Full particulars given to those who mean business and have money. Address Smith Cooperage Co., Louisville, Ky.

GINNING PLANT INCLUDING MACHINERY

BANKRUPT SALE.—There will be sold at Rossville, Ga., May 5, 1914, the plant of the Southern Combing Gin Co., consisting of a reinforced concrete building 60x180, two stories, complete outfit for manufacturing gins, complete ginney equipped plant, ready for operation. Also 28 town lots adjoining plant in Rossville, Ga., four miles from Chattanooga, Tenn. Fine opportunity for investment. All property in excellent condition. Address communications to T. F. McFarland, Trustee, Rossville, Ga.

MANUFACTURING PLANTS

BIRMINGHAM MANUFACTURING PLANT: 15 acres; one-half mile frontage on Southern Railway; with large building equipped 200 H. P. boiler and engine, perfect condition; 60 new 3, 4 and 6-room employees' houses; within manufacturing center; sacrifice. Price \$75,000. Terms to suit. Apply to owner, 1520 16th St. South, Birmingham, Ala.

SAND-LIME BRICK FACTORY

FOR SALE.—A complete sand-lime brick factory, capacity 20,000 per day; will sell as a whole or in part; 125 H. P. engine and boiler; 4-mold Chisholm-Boyd press; Stevenson 9-ft. dry pan; 72-ft. cylinder; full equipment of cars; belting, shafting, etc. Address Cumberland Brick Co., Cumberland, Md.

COTTONSEED OIL MILL

FOR SALE.—Modern, well-equipped, up-to-date, ideally located 3-press (Callahan) cottonseed oil mill; operation 2 years; full description on request. A bargain for quick buyer. Original cost, about \$75,000. Salisbury Realty & Insurance Co., Salisbury, N. C.

ROLLER MILL

FOR SALE.—Fine roller mill property, located in lower Long Green Valley, near Harford road, 10 miles from Baltimore, 1 mile from station; large 4-story stone mill, 40-barrel capacity; sawmill, chop and corn meal mill, cider mill, good dwelling, store and warehouse, large barn and stable, 28 acres of land; can sell at a bargain. Robt. H. Blackburn, 420 Law Bldg., Baltimore, Md.

MINERAL AND TIMBER LANDS, WATER POWERS AND MISCELLANEOUS PROPERTIES

FOR SALE.—Orange groves, farms, cut-over lands, timber lands of all kinds, and brokerage. Address George A. Mawman, 109 Second St., Palatka, Florida.

BAUXITE, fuller's earth and kaolin deposits for sale outright or on royalty basis. We are in position to furnish you with farm lands or mineral clay lands anywhere in South Georgia. Southern Insurance & Realty Company, E. W. Gould, R. C. Houser, Georgia Life Bldg., Macon, Ga.

150,000,000 PINE, 101,000,000 cypress, 1,500,000 gum, 200,000 telegraph poles and cypress ties. 64,000 acres good land in fee, \$1,000,000; or will be sold each separately. 700 acres fine citrus land 4 miles Arcadia, DeSoto Co., for sale or exchange for mercantile business anywhere. 20,000 acres good land in North Fla. for \$3.50 per acre; 1/2 mile be cash to get it for this amount. Jas. R. Vaughan, Bisbee Bldg., Jacksonville, Fla.

Classified Opportunities

FOR SALE ON REASONABLE TERMS: 25,000 acres, Escambia county, Alabama, especially adapted for colonizing.

15,000 acres highest grade Southern hardwood timber, located Southern Mississippi.

14,000 acres, located in Southern Alabama; about 30,000,000 ft. L. L. yellow pine on 7500 acres of this. Land is especially desirable for agricultural purposes.

24,000 acres coal and timber land, located on Frisco Railroad west of Birmingham.

5000 acres of hardwood timber, located on the Alabama River not far from Mobile.

5000 acres, especially desirable for citrus fruit growing, including a townsite located just across the bay from Mobile.

10,000 acres, located in North Baldwin, especially adapted for a ranch.

I own and control all of the above-described properties, and in addition I handle properties as a broker, so that I am in a position to meet most any requirements in Southern acreage property. Address H. H. Wefel, Jr., Mobile, Alabama.

BRICK CLAY PROPERTY

BRICK CLAY.—Attention, Brick Men! Have located within five miles of Atlanta large supply fine brick clay; excellent railroad facilities. This property is splendid location for Southern market. Can be bought reasonably, considering actual value. Estate of James E. Lynch, P. O. Box 519, Atlanta, Ga.

OIL LAND

3 ACRES oil land, Caddo Parish, La., located in shallow stratum section; six to eight hundred to oil sand; title clear; \$300 acre, cash. L. L. Burkhead, Columbus, N. M.

OIL REFINERY

COMPLETE OIL REFINERY to be sold at public sale on April 28, 1914. Located at Fort Smith, Ark. For full particulars address Charles J. Jewett, Receiver, Fort Smith, Ark.

PHOSPHATE ROCK DEPOSIT

FOR SALE—500 acres of blue rock phosphate land near Mt. Pleasant, Tenn., containing 2,000,000 tons running from 58 to 72% bone phosphate of lime. Spur of L. & N. R. R. runs through it. Capt. W. N. Hughes, P. S. A., 523 1/2 Broadway, Nashville, Tenn.

TIMBER LAND FOR SALE

TWO HUNDRED THOUSAND (200,000) acres timber land in Florida, containing over 5,000,000 feet of original growth pine; has been cruised by expert; placed on the market for the first time at a very low figure. South Carolina timber; 15,000 acres on the Atlantic Coast Line and Southern Railroad. Estimated 65,000,000 feet short-leaf pine. For price and full particulars apply to Johnson's American and Foreign Real Estate Exchange, 945 Pennsylvania Avenue, Washington, D. C.

A FEW GOOD TRACTS in Southern States at prices attractive for investment or operation. Hemlock, spruce, oak, poplar, gum, cypress. Real Estate Investment Co., 816 Connecticut Ave., Washington, D. C.

1000 TO 30,000 ACRES virgin forked-leaf white oak, Newton county, Arkansas; new R. R. will go through land; cut 4000 feet acre; \$3 in fee. Fredricks, Springdale, Ark.

FOR SALE—50,000 acres virgin hardwoods in Florida; excellent stave position; ideally located for export; guarantee 8000 to 10,000 feet per acre. Price, \$10 per acre, fee simple. Ralph J. Minahan, Brunswick, Ga.

TIMBER AND TIMBER LANDS IN ALABAMA.—Tracts of virgin pine and hardwood, 5000 to 20,000 acres each; fee simple; all nicely located; 9000-acre tract pierced by main trunk-line railroad and admirably situated for colonization; cut good; prices right. Correspondence solicited from parties meaning business; otherwise don't write. T. M. Bradley, 1023 First National Bank Bldg., Birmingham, Ala.

TIMBER TRACTS located for manufacturers or investors by practical timbermen. Correspondence solicited. Jo A. Parker, Parma, Mo.

MANUFACTURER desiring medium size tract of yellow pine timber at favorable price can learn of something to his advantage by addressing Box 27, Ellisville, Miss.

5400 ACRES of virgin hardwood timbered land in East Tennessee, \$10 per acre; would exchange. Farm Realty Co., 828 Jefferson Co. Bank Bldg., Birmingham, Ala.

FARM AND TIMBER LANDS

FARM AND TIMBER LAND on the easy-payment plan; some small improved tracts; good for cotton, corn, alfalfa and grain. Prices from \$4 to \$25 per acre. W. Knight, Real Estate Dealer, Bigelow, Arkansas.

HAVE select list of large and small farm properties, also timber, coal and colonization tracts, and a large list of income properties for sale and exchange. Let me know your wants. Arthur M. Connor, 224 Oxford Bldg., Washington, D. C.

A BARTOW MAN will sell on easy terms at half value, 265 acres fine farm and citrus land, well timbered, 3 1/2 miles west of Chilocca Station; good neighborhood. Will also exchange for improved South Florida town property. Address P. O. Box 172, Bartow, Fla.

STOCK FARM

FOR SALE—Splendid 7000-acre stock farm in Jefferson county, Florida, at \$3.75 an acre; fertile and level land with clay base. Tutwiler & Powell, Dothan, Ala.

RANCH FOR SALE

100% PROFIT.—If you will buy this 2500-acre ranch in Jackson Co., Texas, and subdivide it, we will contract to dispose of it at 100% profit to you. \$20,000 first payment; 7 years on balance at 6%; liberal release clause for colonizing. Horwood & Co., Cleburne, Tex.

COLONIAL ESTATES AND STOCK FARMS

COLONIAL ESTATES AND STOCK FARMS in Virginia. Green & Redd, Richmond, Va.

COLONIAL ESTATES AND STOCK FARMS in Virginia. Green & Redd, Richmond, Va.

COLONIZATION LANDS

FOR SALE—Marion county, Florida, 20,000 acres, high and dry; an excellent colonization proposition at a ridiculously low price; \$4 per acre. For terms and particulars address Partridge-Woodrow Company, Huntington, W. Va., or Ocala, Florida.

FINE COLONIZATION TRACT.—7000 acres, Arkansas, good level land on two railroads; 1/4 mile county seat; \$3 acre. Fredricks, Springdale, Arkansas.

PLANTATION FOR SALE

15,382-ACRE PLANTATION in South Texas, suitable for colonization, all timber, 3100 acres in cultivation; has 20 flowing wells, deepest 300 feet, but rainfall sufficient; improvements cost over \$50,000; railroad to build through tract. Price, \$19.50 per acre; 1/2 cash; balance can run at 6 percent. For full information write to Joe Prowse, Austin, Texas.

ORCHARDS FOR SALE

ONE ORCHARD, containing 200 acres land, 10,000 trees, most of them in bearing, 2 good houses, all necessary packing-houses and outbuildings. A money-maker. Price \$25,000. An orchard with about 6000 fruit trees, practically all in bearing; all necessary buildings and near shipping station. Price \$7500.

A good farm of 80 acres with 1800 bearing peach trees, near church and school; a fine home. Price \$2500.

One 14-acre bearing peach orchard, containing 1900 trees. Price \$800. And we have some others. Write us for what you want. Address No. 1514, care Manufacturers Record, Baltimore, Md.

FRUIT, FARM AND TRUCK LANDS

ARKANSAS

FAMOUS SPRINGDALE FRUIT DISTRICT.—Best part of Ozarks; fine class of people; no malaria, mosquitoes, negroes, saloons; pure soft water. Summer homes, bearing orchard, cheap stock lands. Free lists. Fredricks, Springdale, Arkansas.

FLORIDA

5000 ACRES of Florida lands in the famous Indian River orange, grapefruit and trucking belt, for sale or exchange for clear income property. Price \$40 per acre. A. L. Hill, owner, 221 W. Forsyth St., Jacksonville, Fla.

THREE MONTHS FREE.—Subscription to the Indian River Farmer. For truckers, fruit growers, general farmers, and folks who want to know about Florida. Address Indian River Farmer, Dept. "V-1," Vero, Fla.

FOR SALE—Citrus land; high; among clear lakes; the best adapted for orange or grapefruit culture; S. A. L. R. R. just starting through this territory. Buy now while prices are low. J. D. Clark, Bartow, Fla.

AN EXCELLENT PROPERTY FOR HOLDING AN INVESTMENT OR FOR IMMEDIATE DEVELOPMENT.—1120 acres in Suwannee county, Florida, about 3 miles east of O'Brien, a town of 300 population, with good school, churches, sawmill, turpentine still, good stores and other advantages, the main line of A. C. L. R. R. passing directly through it.

It is situated in a general farming section where excellent crops of corn, cotton, sugarcane, sweet potatoes, velvet beans, cowpeas, and numerous others are raised. Two main roads leading to O'Brien cross the land, and a number of improved farms adjoin it.

The soil is Norfolk loam with clay subsoil, and when properly cultivated will produce all the crops for which this section of Florida is noted.

This property is offered at \$6 per acre on following terms: One-fourth cash, and balance in L. 2 and 3 years, deferred payments to be secured by mortgage at 8%. A small discount may be arranged for all cash. Address George L. Colburn, Lake City, Fla.

THE PALATKA FARMS COMPANY of Palatka, Florida, offers to homeseekers the very superior advantages of splendid soil, adapted to potatoes, corn and trucking, or that for oranges and grapefruit, or for combination of both, with location unsurpassed, lying along the beautiful St. Johns River, 2 miles of Palatka, an up-to-date city of 8000 population. It boasts of electric-light and gas plants, four railroads and cheap river transportation. Write for literature. P. J. Becks, Palatka, Fla.

GEORGIA

850 ACRES fine farming land as you will find in Georgia, \$25 per acre; will raise anything that grows in Central Ga.; close to railway and county seat. Southern Ins. & Realty Co., Ga. Life Bldg., Macon, Ga.

LOUISIANA

ANY GOOD FARMER with a little money who would be interested in a most splendid and fertile farm in North Louisiana, good for stock, corn, hay and cotton, will do well to write the owner, Wm. B. Kelly, care of The Kelly-Taylor Co., New Orleans, La.

MARYLAND

ONE OF THE FINEST FARMS in Harford county, Maryland, three miles from Darlington, the social center of the county, situated on the Susquehanna River; fishing club near; excellent rock fishing; on the new State road between Maryland and Pennsylvania, 20 miles from Baltimore, located right in the heart of the blue grass regions of Harford county; many Virginia families maintain estates here; excellent for stock raising. This farm contains 200 acres, with a mansion of 16 rooms and bath, modern in every sense; house alone cost \$26,000; all new fencing of post and rail and panel over entire farm. Views from any portion of the estate looking into three counties; always recognized as the finest farm in this section of Maryland. This property can be bought for \$30,000, and satisfactory terms can be made to purchaser. The Webb & White Co., 717-719 Title Bldg., Baltimore, Md. St. Paul 5966-5967.

FOR SALE—Productive Carroll county, Md., farm; 350 acres; near railroad station; stone dwelling; necessary outbuildings, all in good order; well watered; fruit; complete equipment if desired. J. Harry Igo, Professional Bldg., Baltimore, Md.; D. Sterrett Gittings 401 Maryland Trust Bldg., Baltimore, Md.

MISSISSIPPI

FARM LANDS in large and small tracts, stock plantations and colonization bodies. Southland Realty Co., Corinth, Miss.

SOUTH CAROLINA

FOR SALE—Well-located fertile farms, in tracts of 50 to 200 acres, where labor is plentiful, in 3 miles of a live town with a good railroad, and in 6 miles of the main line of the Southern. This is fine chocolate clay land, has some very fine branch bottoms, and about 100 acres of fine pasture. This could be made one of the finest farms for stock raising in the country. Address P. O. Box 184, Anderson, S. C.

TEXAS

OPPORTUNITY.—A fortune for a little money; 100 acres close to oil well and good town; good land; bargain. F. Kiber, Angleton, Tex.

WEST VIRGINIA

FOR SALE—One and five acre farms near junction of two railroads. H. L. Alexander, Martinsburg, W. Va.

FINANCIAL

WE ARE SELLING the capital stock of the United Development Company, a company that proposes to buy, develop and colonize lands all over the South. The natural increase in values will pay good dividends. Your money is safe in lands. Stockholders can buy lands from the company at minimum prices. Let us send particulars. Bolton Agency Co., 322 1/2 19th St., Birmingham, Ala.

SAFE FOR SALE

WILL SELL OR EXCHANGE large iron safe, burglar and fire proof, double-door vault with two combinations and time lock; dimensions outside, H. 86, W. 39, D. 41; inside, H. 82, W. 34, D. 37; lots of space; pendulum showing inside on request. We want burglar-proof safe suitable for inside vault and vault doors. E. E. Emerson, Spray, N. C.

WAGONS FOR SALE

WAGONS FOR SALE.—Ten Troy dump-bottom reversible traction wagons, 1 1/2-yard, with 10-inch tires; have been used four months. Geo. G. Henderson, care Manufacturers Record, Balto., Md.

DREDGE FOR SALE

1 1/2-YD. DREDGE FOR SALE.—Dredge now at work on drainage canal; can make delivery in 30 to 60 days. Dredge almost new. Will sell cheap. Box 23, Greensboro, N. C.

MACHINERY AND SUPPLIES

NEW 50 H. P. MUNCIE OIL ENGINE; must sell at once; reason, changes in plant. 125 H. P. Otto gas producer; great bargain if bought before moving; reason for sale, installing larger gas plant. The Jacobson Engineering Co., Saratoga Springs, N. Y.

FOR SALE—Two sets of 30"x10" Allis-Chalmers crushing rolls, complete, with hoppers and pulleys, ready to set up and start crushing stone; a great bargain. Address F. L. Robbins, Salisbury, N. C.

RAILWAY TIES

WANTED—To sell 30,000 white oak ties, 8x8x8; 2500 red oak, 8x8x8. Ties ready for delivery at Louisville, Miss., and adjoining towns. Quote prices f. o. b. cars Louisville. Also, want contract for sap pine ties. The People's Tie & Timber Co., Louisville, Miss.

PATENTS FOR SALE

A REAL OPPORTUNITY.—The only really practical harness rack for display purposes or for the farmer; made of metal. Will sell patent or place on royalty. Write S. B. Lyster, Tulsa, Tex.

STOP, STAY OUT AND WONDER.—Latest improved double combination door lock, operated with two keys in connection with the knob and spindle; absolutely burglar-proof. The lock is of ordinary size and form. For further information apply to James T. Brockin, Huffman, Ark.

DOOR CHECK AND CLOSER—John A. Cross, Westwood, N. J.—This device is hidden in upper door casing, a compression spring working against a collar, which travels on an upright spiral, exerts all force necessary. Any man or woman can attach. Works equally efficient on swinging door, non-efficient products already on market. Have created demand, together with low cost of manufacturing. Assures immediate profits. Information regarding sale of recent patents from above address.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER AND PATENT LAWYER, Suite 40 Victor Building, Washington, D. C. Member Bar U. S. Supreme Court. Patents and Trademarks. Inventions are considered both from Engineering and Legal standpoints in my prosecution of patents. An experience of over 9 years as Examiner in U. S. Patent Office and over 6 years as Patent Expert in important patent suits are my special qualifications. Reports upon validity and infringement. Send sketch of invention for advice.

PATENTS.—Herbert Jenner, patent atty. and mechanical expert, 606 F St., Washington, D. C. I report free of charge if a patent can be had and its exact cost. Send for circular.

PATENTS THAT PROTECT.—Careful, honest work in every case. Patent your ideas; they may bring you wealth. 64-page book free. Fitzgerald & Co., 817 F street, Washington, D. C. Established 1878. Send for our book.

PATENT YOUR INVENTION.—Send sketch for free expert search and report as to patentability. Books on inventions and patents, and book of references from congressmen, manufacturers, bankers and inventors, sent free. John S. Duffie & Co., Patent Attys., 620 F St. N. W., Washington, D. C.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Send sketch or model for free search of Patent Office records. Trade-marks registered. Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

"PATENTS AND PATENT POSSIBILITIES" is a 72-page treatise which tells all about patents, what to invent and where to sell it. It gives honest advice to inventors, and is full of valuable and interesting information. Write for it today! It is free. H. S. Hill, 916 McLachlen Bldg., Washington, D. C.

PATENT YOUR IDEAS.—\$9000 offered for certain inventions; book, "How to Obtain a Patent" and "What to Invent," sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, patent attorneys, 978 F street, Washington, D. C.

PATENTS secured or Fee returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for one invention; \$14,000 for others. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., Washington, D. C.

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

GOVERNMENT PROPOSALS

PROPOSALS FOR MOTORS AND CENTRIFUGAL PUMPS, FLOTT SWITCHES, ELECTRIC CABLE, BABBITT METAL, SHEET COPPER, SHEET BRASS, BRONZE BARS, BRASS TUBING, STEEL WIRE, NUTS, TACKS, RIVETS, BOLTS, SCREWS, REPAIR LUNGS, HAMMERS, BLACKSMITH'S PUNCHES, PIPE CUTTERS, DIES, RATCHET DRILLS, TWIST DRILLS, WRENCHES, SAWS, PLIERS, HINGES, WIRE-ROPE THIMBLES, HACK-SAW FRAMES, FILES, TOOL HANDLES, MOP HANDLES, TRUCK HANDLES, WHEELBARROWS, PADLOCKS, TROWELS, WARDROBE LOCKS, SPIRIT LEVELS, CANT HOOKS, GREASE CUPS, ENGINE LUBRICATORS, LANTERNS, WATER GAUGES, WINDOW GLASS, CARLOCKS, HOSE, PACKING, ASBESTOS GASKETS, MANILA ROPE, MARLINE, TWINE, MOP HEADS, CHAMOIS SKINS, TOILET PAPER, PAPER DRINKING CUPS, FIRE CLAY, ASBESTOS CEMENT, METAL POLISH, SOAP POLISH, MAHOGANY DOORS, WINDOWS, SASH AND FRAMES WITH HARDWARE, AND OATS. Sealed proposals will be received at the office of the General Purchasing Officer, Panama Canal, Washington, D. C., until 10:30 A. M. May 8, 1914, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 845) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill.; and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR FURNISHING OR FURNISHING AND ERECTING STRUCTURAL-STEEL WORK REQUIRED FOR DECKING OF SECTIONS OF THE QUAY WALL FOR THE BALBOA TERMINAL DOCKS. Sealed proposals will be received at the office of the General Purchasing Officer, Panama Canal, Washington, D. C., until 10:30 A. M. May 12, 1914, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 846) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill.; and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR FURNISHING, OR FURNISHING AND ERECTING, STEEL ROLLING DOORS FOR PERMANENT SHOP BUILDINGS. Sealed proposals will be received at the office of the General Purchasing Officer, Panama Canal, Washington, D. C., until 10:30 A. M. May 6, 1914, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 847) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill.; and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

TRASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., April 18, 1914. Sealed proposals will be opened in this office at 3 P. M. May 29, 1914, for the construction, complete (including mechanical equipment, lighting fixtures, and approaches), of the United States postoffice at Rocky Mount, N. C. The building is two stories and basement, ground area, 4700 square feet; first floor fireproof; stone and brick facing; composition roof. Drawings and specifications may be obtained from the custodian of site at Rocky Mount, N. C., or at this office, in the discretion of the Supervising Architect. O. WENDEROTH, Supervising Architect.

TRASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., April 15, 1914. Sealed proposals will be opened in this office at 3 P. M. May 27, 1914, for the construction (including mechanical equipment, interior lighting fixtures, and approaches) of a one-story-and-basement stone, terra-cotta and brick-faced building of 3700 square feet ground area, nonfireproof construction, tin and composition roof, for the United States postoffice at Pulaski, Tenn. Drawings and specifications may be obtained from the custodian at Pulaski, Tenn., or at this office. O. WENDEROTH, Supervising Architect.

PROPOSAL ADVERTISING INFORMATION

RATE: 20 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 9 A. M. Wednesday. Copy received later cannot be published until issue of following week.

NIGHT LETTER: When too late to send copy by mail to reach us by 9 A. M. Wednesday, forward by night letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—20 cents per line per insertion.

U. S. ENGINEER OFFICE, Room 309 Custom-house, Baltimore, Md., April 2, 1914. Sealed proposals for dredging in certain rivers and harbors on east shore of Chesapeake Bay will be received at this office until one o'clock P. M. May 4, 1914, and then publicly opened. Information on application. LANSING H. BEACH, Col., Engrs.

U. S. ENGINEER OFFICE, Wilmington, N. C., Apr. 9, 1914. Sealed proposals for furnishing and delivering about 11,000 tons riprap stone at Wilmington, N. C., will be received at this office until 12 M. May 8, 1914. Information on application. H. W. STICKLE, Maj., Engrs.

BOND OFFERINGS

Bonds For Sale

The Town of Norton, Va., has five thousand dollars thirty-year 5 per cent. Street Improvement Bonds for sale. Address T. M. PEPPER, Mayor.

or G. A. SMITH, Chairman Finance Committee.

Mississippi State Bonds

Under authority of Chapter 107, Laws 1914, the State of Mississippi will issue and sell \$1,250,000 of 4½ per cent. bonds, and sealed bids will be received at the Governor's office in Jackson, Mississippi, until noon May 20, 1914.

For further information write Governor EARL BREWER, or State Treasurer P. S. STOVALL, Jackson, Mississippi.

\$100,000 Sullivan County (Tennessee) Road Bonds

Sealed bids will be received by Sullivan County Pike Road Commission until 1 o'clock P. M. Thursday, May 21, 1914, at Bluff City, Tennessee, for \$100,000 five per cent. twenty and thirty-year road improvement bonds. The right to reject any and all bids is reserved. For further information address

W. D. LYON, Chairman Pike Road Commission, Bluff City, Tennessee.

Bond Sale

Sealed bids will be received by J. R. Cox, Secretary of the Board of Improvement of Bridge Improvement District Number One of the City of Newport, Arkansas, until 10:30 A. M. May 22, 1914, at the office of Jno. W. & Jos. M. Stayton, Newport, Arkansas, for the purchase of not less than \$24,660 6½, 5½ and 5 per cent. bonds of Bridge Improvement District Number One of the City of Newport, Ark.

For further information write to the undersigned.

J. R. COX, Secretary, Newport, Arkansas. Dated this 16th day of April, 1914.

\$125,000 5% Bonds

\$125,000 City of Daytona, Florida, 5 per cent. Sewerage Bonds. Notice is hereby given that sealed bids will be received by the Board of Public Works of Daytona, Florida, until two (2) o'clock P. M. May 5, 1914, at its office in Daytona, for the purchase of \$125,000 of gold five per cent. (5%) Sewerage and Drainage Bonds of the City of Daytona, Florida. Said bonds are dated July 1, 1914, and become due July 1, 1954. Seventy-five of said bonds are of the denomination of \$1000 each, and one hundred of the denomination of \$500 each. Said bonds and the interest coupons are payable at the office of the Treasurer of the City of Daytona, or at the Office of the United States Mortgage & Trust Co., New York City.

All bids must be unconditional and must be accompanied by a certified check for two (2) per cent. of the amount of the issue. No bid for less than par will be considered. The right is reserved to reject any and all bids.

BOARD OF PUBLIC WORKS, DAYTONA, FLORIDA.
J. MILLIGAN,
D. D. ROGERS,
Committee.

Notice of Sale of \$75,000 Road Bonds

The County Judge of Navarro County, Texas, will receive sealed bids up to 10:30 A. M. May 15, 1914, for \$75,000 of bonds of Road District Number Three of Navarro County, Texas. Bonds are dated September 1, 1913, due and payable 40 years from date of issue, either with 20-year option, or serially, \$2000 per annum after the first year. Interest payable semi-annually at the office of the County Treasurer at Corsicana, Texas, or in New York, at the option of the holder. Denomination \$1000. Certified check for \$1000, payable to R. R. Owen, County Judge, to accompany each bid. Any further information desired will be furnished by the undersigned, to whom all bids must be addressed. The right is reserved to reject any or all bids.

H. D. JOHNSON, County Auditor, Corsicana, Texas.

Notice to Bond Buyers

Sealed bids will be received up to 7:30 P. M. Monday, May 4, 1914, by the City of New Cordell, Oklahoma, for the furnishing of all legal proceedings, forms, etc., furnishing the blank bonds, and the purchasing of an issue of the city's six (6) per cent. twenty-five (25) year water-works extension bonds, payable at any time after ten (10) years. Said bond issue to be in the amount of fifty-five thousand (\$55,000) dollars. Each bid to be accompanied by a certified check in the amount of two (2) per cent. of the proposal, made to the order of the City Clerk of the City of New Cordell, Oklahoma. Bids to be conditioned on the result of an election to be called on or before August 25, 1914, for the purpose of voting such bonds. The city reserves the right to reject any or all bids.

J. REID, City Clerk.

Notice for Bids and Disposition of Bonds in Accordance With Section 792, General Statutes of Florida

The Board of County Commissioners of St. Johns County, Florida, will receive bids for the purchase of \$650,000 of St. Johns County, Florida, five and one-half (5½) per cent. bonds, bearing interest coupons, at the Clerk's office at St. Augustine, St. Johns County, Florida, on or before 10 o'clock in the forenoon of Monday, the 11th day of May, A. D. 1914.

The principal of said bonds shall be due and payable on the 1st day of May, 1944. Said bonds dated May 1, 1914, and bear interest from said date. Interest on said bonds shall be due and payable on the 1st day of May and November of each year.

Bonds to be delivered to bidder as money is needed to carry out contract predicated upon the issue of said bonds.

Bidders will include in bid that interest will be paid by bidder from May 1, 1914, to date of delivery of bonds.

The County Commissioners reserve the privilege of redeeming any part of the issue of said bonds at 102 after five years and 101 after ten years from the date of the issue of said bonds.

Any and all bids may be rejected if the County Commissioners deem it to the interest of the county so to do.

Address all bids to the County Commissioners of St. Johns County, Florida, care of W. Wallace Snow, Clerk, St. Augustine, Florida.

The County Commissioners require of all bidders for said bonds that they give security by bond in the sum of five per cent. of the amount of the bid, running to the County Treasurer, with sureties, that the bidder will comply with the terms of the bid.

Certified checks will not be accepted in lieu of bonds.

W. WALLACE SNOW, Clerk Board of County Commissioners of St. Johns County, Florida. April 7, 1914. (Official Seal.)

Bond Sale

Sealed proposals will be received by Geo. L. Huffman, County Judge of Harrison County, Texas, until 12 o'clock noon Thursday, May 14, 1914, for \$300,000 5 per cent. Road District No. 1 bonds. Date of bonds, April 1, 1914; due 1954; optional after 10 years.

Bids for these bonds will be received for \$100,000 lots or entire issue.

Certified check for 1 per cent. of amount of bid must accompany bid. Right to reject any and all bids is reserved.

Address

GEO. L. HUFFMAN, County Judge, Marshall, Texas.

\$50,000 6% Bonds

Hazlehurst, Mississippi, April 17, 1914. Sealed bids will be received by the Board of Supervisors of Copiah County, Mississippi, up to 2 P. M. May 4, 1914, for the purchase of \$50,000 Supervisor's District Number Two Road Bonds, bearing 6 per cent. interest, payable semi-annually. Bids to be accompanied by certified check for 5 per cent. of amount bid.

B. SHELTON, Chancery Clerk.

\$60,000 City of Fayetteville (Tenn.), 5% Semi-Annual Coupon Sewer Bonds

Sealed bids are invited for the purchase of Sixty Thousand (\$60,000.00) Dollars coupon Sewer Bonds of the City of Fayetteville, Tenn., to be opened on May 12, 1914, at 2 o'clock P. M. The bonds were authorized at the election held on April 4, 1914, and are issued as authorized and provided by and under Chapter 199 of the Acts of the General Assembly of the State of Tennessee of 1907, as amended by Chapter 319 of the Acts of the General Assembly of the State of Tennessee of 1913. The bonds are of Five Hundred Dollars (\$500.00) denomination, bear date of May 1, 1914, and mature May 1, 1934; optional after ten years (10), with interest at the rate of five per cent. per annum (5 per cent.), payable semi-annually—May 1 and November 1. No bid can be received for less than par and accrued interest. A certified check of One Thousand Dollars (\$1000.00) is required to accompany bids. The City reserves the right to reject any and all bids. Address either J. M. Fulton, Mayor, or Hiram Higgins, Clerk, Fayetteville, Tenn. April 9, 1914.

Notice of Proposal to Issue \$40,000 Claiborne County Bonds

Port Gibson, Miss.

By order of the Board of Supervisors of Claiborne County, State of Mississippi, notice is hereby given that for the purpose of paying off the floating indebtedness of said county and providing a revenue for the General Fund for the year 1914, bonds of Claiborne county, Mississippi, will be issued by said Board at the regular May, A. D. 1914, meeting of said Board in the sum of forty thousand dollars, said bonds to mature twenty years from the date of their issuance, to bear interest at the rate of 5 per cent. per annum, payable annually at the Hanover National Bank, New York city, N. Y.; to be in denomination of one thousand dollars each; to be numbered in regular series from one upward; to be registered as issued, to be payable to bearer, and shall not be sold for less than their face value. Said bonds shall mature twenty years from the date of their issuance, and paid at the Hanover National Bank, New York city, N. Y., and said bonds shall show on their face for what purpose issued. Sinking fund will be provided for the payment of the interest on said bonds and for the redemption of said bonds by levying annually a special tax to be used exclusively in paying the interest on said bonds and providing a sinking fund for their redemption.

All expenses of preparing the bonds and delivering them will be paid by the county. These bonds will be issued under an act of the Legislature of the State of Mississippi, approved February 13, 1914, authorizing said county to issue same. That a check of five hundred dollars, certified by some bank, must be deposited with each bid to show good faith.

That sealed bids for the said bonds will be received by said board at their regular May, A. D. 1914, meeting up to 2 P. M. on the first Monday and 4th day of May, at which time said bids will be opened and said bonds sold and awarded to the highest and best bidder or bidders, the Board, however, reserving the right to reject any and all bids for said bonds.

Witness my hand and seal of office this 7th day of April, 1914.

B. H. MOREHEAD, Chancery Clerk.

PROPOSALS

SEWERS

WATER-WORKS

ELECTRIC LIGHT PLANTS

BRIDGES

PAVING AND GOOD ROADS

Grading and Macadamizing

NOTICE TO CONTRACTORS.

Sevierville, Tenn.

Sealed bids will be received by the Road Commissioners of Sevier County, at the Courthouse in Sevierville, up to 12 o'clock M. May 1, 1914, for the grading of about 60 miles of road and the macadamizing of about 30 miles of road.

Profiles and specifications can be seen in the Engineer's office after April 25, 1914. A certified check for \$500 must accompany each bid.

The right to reject any and all bids is reserved by the Commissioners.

H. C. BUTLER,
W. R. CATLETT, JR.,
J. C. WEBB,
Commissioners.

Paving, Sewerage and Gas Pipe Lines

Rocky Mount, N. C.

Sealed proposals will be received by the Mayor and Board of Aldermen of the City of Rocky Mount, at the City Hall in Rocky Mount, N. C., until 4.30 P. M. May 5, 1914, for Street Paving, Sewerage and Gas Pipe Lines. The work will consist of about—

40,000 sq. yds. of Asphaltic or other pavement.

10 miles of Pipe Sewers from 8 to 18 inches in diameter.

10 miles of Cast-Iron Gas Pipe Lines from 4 to 10 inches in diameter.

And appurtenances.

Proposals must be marked "Proposal for Improvements."

All bids must be upon blank forms provided in the Proposal and Contract and Specifications.

Each bid must be accompanied by a certified check for at least 5 per cent. of the amount of bid as an evidence of good faith.

Plans and specifications will be on file at the Superintendent's office in Rocky Mount, and at the office of the Engineer in Charlotte, and copies of the specifications, form of proposal, etc., will be mailed upon application to the Engineer at Charlotte, N. C.

The right is reserved to reject any or all bids.

L. F. TILLERY, Mayor.
C. H. HARRIS, Clerk.

Engineer:

GILBERT C. WHITE,
Charlotte, N. C.

Notice to Paving Contractors

Sealed proposals will be received by the County Commissioners of the County of Orange, State of Florida, at the office of the Clerk of the Circuit Court of Orange County, Orlando, Florida, at or before 2 P. M. Monday, May 11, 1914, for grading and paving with brick the following highways:

Highway No. 1—68,650 square yards. Certified check for \$2500.

Highway No. 2—22,100 square yards. Certified check for \$800.

Highway No. 3—36,360 square yards. Certified check for \$1600.

Highway No. 4—84,500 square yards. Certified check for \$3900.

Highway No. 5, 84,500 square yards. Certified check for \$3900.

Proposals for each highway must be presented in a separate sealed envelope, endorsed on the outside with the number of the highway for which the proposal is made.

Each proposal must be accompanied by a certified check issued by a national bank and payable at sight to the order of the Clerk of the Circuit Court for the amount set opposite each highway in this notice.

The successful bidder or bidders will be required to give a bond equal to the amount of his or their bid or bids, such bond to be executed by a surety company, to be approved by the County Commissioners.

The County Commissioners reserve the right to reject any and all bids.

Copies of the plans and specifications and the form of contract may be obtained upon application to Mr. B. M. Robinson, Clerk of the Circuit Court, or to G. R. Ramsey, Highway Engineer, Orlando, Florida. A deposit of fifteen dollars will be required, which will be refunded when the plans and specifications are returned.

M. O. OVERSTREET,
Chairman Board of County Commissioners.

B. M. ROBINSON,
Clerk of the Circuit Court.

G. R. RAMSEY,
Highway Engineer.

Road Construction

NOTICE TO CONTRACTORS.

Sealed proposals will be received by the Road Commission of Rutherford County, at the office of the County Road Superintendent, in the Courthouse in Rutherfordton, N. C., until 12 o'clock on Thursday, April 30th, 1914, for the building of about 25 miles of public roads.

The work will consist of clearing, grading and laying of culvert pipe, etc.

Specifications and blank forms for proposals will be furnished upon application. Each bidder must accompany his bid by a certified check for \$50, made payable to the County Treasurer. The right is reserved to reject any or all bids.

C. C. CLARK,
County Road Superintendent,
Rutherfordton, N. C.

State Highway

STATE OF MARYLAND.
STATE ROADS COMMISSION,
601 Garrett Building,
Baltimore, Md.

NOTICE TO CONTRACTORS.

Sealed proposals for building 5 sections of State Highway, aggregating about 18.40 miles in length, as follows:

Contract No. Bc-14—BALTIMORE CITY: One section of street along Hanover street, from Lee street to Baltimore street, about .51 mile in length. (Sheet Asphalt and Belgian Block.)

Contract No. Bc-3 Br.—BALTIMORE CITY: Filling in concrete bridge over Gwynn's Falls along the Frederick road.

Contract No. Ch-3—CHARLES COUNTY: One section of road from La Plata to Bel Alton, about 4.43 miles in length. (Gravel.)

Contract No. G-5—GARRETT COUNTY: One section of road between Noyes and Accident, about 2.75 miles in length. (Macadam or Concrete.)

Contract No. G-12: One section of road between Accident and Keyser, about 7.00 miles in length. (Macadam resurfacing.)

Contract No. M-9—MONTGOMERY COUNTY: One section of road from King's Valley to Claggettville, about 3.71 miles in length. (Macadam or Concrete.)

Will be received by the State Roads Commission at its office, 601 Garrett Building, Baltimore, Md., until 12 M. on the 6th day of May, 1914, at which time and place they will be publicly opened and read.

Bids must be made upon the blank form contained in the book of specifications.

Specifications and plans will be furnished by the Commission upon application and cash payment of \$1 for each contract, as hereafter no charges will be permitted.

No bid will be received unless accompanied by a certified check for the sum of five hundred (\$500) dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission, this 15th day of April, 1914.

O. E. WELLER,
Chairman.

WM. L. MARCY,
Secretary.

Paving Material

Jacksonville, Fla.

Sealed proposals will be received by the Board of County Commissioners for Duval County, Florida, at their office in the Courthouse, Jacksonville, Florida, on Wednesday, the 6th day of May, 1914, at ten (10) o'clock A. M., for furnishing materials set forth in the specifications for paving with concrete and (or) vitrified paving brick the county road from the south end of the brick pavement on the John Anderson Highway through Bayard to the county line, a distance of twenty-one thousand nine hundred and forty-six (21,946) feet, fifteen feet wide between curbing.

Delivery to be made in carload lots at Durbin, Bayard or Jacksonville.

Copy of specifications pertaining to sand, cement, broken stone and vitrified paving brick can be obtained of A. F. Harley, Construction Engineer, Jacksonville, Florida.

A certified check of five hundred dollars (\$500), made payable to J. H. Patterson, Chairman of the Board of County Commissioners, must accompany the bid. The envelope to be marked "Bid on material for John Anderson Highway" and mailed or delivered to Frank Brown, Clerk.

The Board reserves the right to accept or reject any, all or parts of bids.

J. H. PATTERSON,
Chairman Board of County Commissioners.

FRANK BROWN,
Clerk Circuit Court.

Street Department

Charleston, S. C., April 16, 1914.

Sealed proposals in duplicate will be received at this office until 8 P. M. Tuesday, May 5, 1914, for 65,000 square yards, more or less, of paving on concrete base, of which it is estimated that 20,000 square yards to 25,000 square yards will be Cressed Wood Block and the remainder Sheet Asphalt, Asphaltic or Bituminous Concrete or Bitulithic. Specifications will be furnished prospective bidders upon receipt of \$10 as guarantee for their return. The right is reserved to reject any or all bids.

J. H. DINGLE,
City Engineer.

BUILDINGS

Elks' Home Building

Asheville, N. C.

Sealed proposals will be received by the Elks' Home Co., Asheville, N. C., on or before noon May 2, 1914, for an Elks' Home Building, Asheville, N. C.

All bids shall be made and submitted on special proposal blanks furnished by the Architects, otherwise they will not be considered, and each bid must be accompanied by a certified check of 5 per cent. of the lump sum bid as a guarantee that the successful bidder will enter into a contract according to plans and specifications, said check to be made payable to the Elks' Home Co. If for any reason the bidder fails to

accept the proper contract and bond as required within ten days after notification of the acceptance of his bid, then said certified check will become forfeited to the Elks' Home Co.

The Elks' Home Co. reserves the right to reject any and all bids or parts of bids. The sealed bids must be addressed as follows: Bids for "The Elks' Home," Smith & Carrier, Architects, College Street, Asheville, N. C.

Copies of drawings and specifications may be obtained from the Architects upon making a deposit for each set by certified check of \$25; \$20 of same will be returned to the maker upon receipt of the said drawings and specifications in good condition and accompanied by bona-fide bid as above stated.

Additional copies of drawings and specifications will be supplied for sub-contractors upon payment of \$10, \$5 of amount of which will be returned to sub-contractors upon receipt of said drawings and specifications in good condition; the \$5 retained for plans and specifications to cover the expense of issue.

City Hall and Police Headquarters

Tampa, Fla.

Bids for the construction of City Hall and Police Headquarters at Tampa, Florida.

Sealed proposals will be received by the Board of Public Works at Tampa, Florida, from general contractors on or before Tuesday, May 12, 1914, 2 P. M., for the construction of above buildings. Each bid must be accompanied by a certified check for the sum of 2 per cent. of the amount of the bid, check to be made payable to the Board of Public Works.

Contractors can obtain plans by applying to Bonfoey & Elliott, Architects, Tampa, Florida. Each application must be accompanied by a certified check of \$50. This entitles applicant to one complete set of plans and specifications. \$40 of the above amount to be returned upon returning plans in good condition. Additional plans can be obtained by depositing certified check of \$15 per set. \$5 of this amount to be returned upon returning plans in good condition. Deposit checks to be made payable to Bonfoey & Elliott.

Proposals for furnishing and installing complete elevator equipment in above buildings will be received on above date. Each bid must be accompanied by a certified check of 2 per cent. of the bid, made payable to the Board of Public Works. Plans and specifications can be obtained by applying to Bonfoey & Elliott, Architects.

The Board of Public Works reserves the right to reject any or all bids submitted.

D. B. McKAY, Chairman.
Attest: ALLEN THOMAS, Clerk.

Reinforced Concrete Prison

Sealed proposals will be received by the Board of County Commissioners for New Hanover County, up until twelve o'clock noon Tuesday, May 12, for the furnishing of all labor, materials and appliances required in the construction of a reinforced concrete prison building in accordance with plans and specifications prepared by James F. Gause, Jr., Architect, Room No. 30, Odd Fellows' Bldg., Wilmington, N. C.

Plans and specifications and sheet of instructions to bidders may be obtained from the Architect upon a deposit of fifteen (\$15) dollars, said deposit to be refunded upon the safe return of all plans and specifications in good condition to the Architect, or the quantities may be taken off of the plans in the Architect's office.

The Board of Commissioners reserve the right to accept any or reject any and all proposals submitted.

JAS. F. GAUSE, JR.,
Architect.

April 17, 1914.

BRIDGES

Notice to Bridge Contractors

Sealed bids will be received at the office of County Judge of Brazoria County, Texas, at Angleton, until 12 o'clock noon of Monday, May 11, 1914, for repair of concrete pier of steel highway bridge over Brazos River at Columbia, in said county, according to plans and specifications on file in office of County Judge in Angleton, Texas, and at office of J. C. Tolman Engineering Co., at Houston, Texas.

Each bid must be accompanied by a certified check for 5 per cent. of amount of bid, payable to order of J. W. Munson, County Judge, and forfeited to Brazoria County if default is made in execution of contract and bond within ten days after bid is accepted. The Commissioners' Court reserves the right to reject any and all bids.

(Signed)
J. W. MUNSON,
County Judge of Brazoria County, Texas.

Steel Girder Viaduct

Richmond, Va.

Sealed proposals will be received at this office until 12 o'clock noon May 5, 1914, for the construction and erection of a steel girder and "I" beam viaduct across James River at 9th street to replace a part of the present old bridge at this site.

Plans and specifications for this work can be seen upon application at the office of the City Engineer. They will be furnished prospective bidders upon deposit of \$10, which will be refunded bidders upon the return of

plans and specifications in good order.

A certified check in the sum of \$1000, made payable to the City Treasurer, must accompany each proposal as a guaranty of execution of contract.

The Administrative Board reserves the right to reject any or all bids.

CHAS. E. BOLLING,
City Engineer.

MISCELLANEOUS

Machinery for Ice Plant

Bids wanted for machinery for 15-ton ice plant, delivered Morehead City, N. C. Address: Morehead City Sea Food Company, Morehead City, N. C.

Drainage Ditches and Canals

NOTICE TO CONTRACTORS.

Kinder, La.

The Kinder Drainage District Number Two of Kinder, Louisiana, will let to the lowest responsible bidder, upon sealed bids to be filed with L. M. Ladue, Secretary, on or before 12 o'clock noon on May 18, 1914, the following work in the construction of drainage ditches and canals within said district: The removal of approximately 573,000 cubic yards of earth in the construction of four main canals with their laterals and branches.

The clearing and partial removal of logs, stumps and debris of approximately 187 acres of right of way.

The construction of one main line railroad trestle. The removal and reconstruction of three main line railroad trestles. The removal and reconstruction of two log tram trestles.

Detailed plans and specifications are on file with J. F. Hervey, C.E., of said district, at Jennings, La., or L. M. Ladue, Secretary of the Board at Kinder, La.

The contractor shall be required to commence work within thirty days after signing of contract and approval of his bond, and shall remove a minimum of 60,000 cubic yards per month, and shall complete the contract within a period of ten months from date of commencement.

Contractor required to give bond of some surety company in the sum of \$40,000 for the faithful performance of contract.

All bidders shall be required to accompany each bid with a certified check of some bank domiciled in Louisiana, payable to T. T. Nixon, President, in the sum of \$1000, as guarantee that if his bid is accepted he will execute contract and furnish the bond within ten days after notice of acceptance.

Bidder's blanks will be furnished upon application to J. F. Hervey, C.E., Jennings, La., or L. M. Ladue, Secretary, Kinder, La.

Commissioners reserve the right to reject any and all bids.

Witness my official signature hereto at Kinder, Louisiana, April 13, 1914.

T. T. NIXON,
President of Kinder Drainage District Number Two.

Garbage Reduction Equipment

City of Akron, Ohio.

Sealed proposals will be received at the office of the Director of Public Service, Akron, Ohio, until twelve o'clock noon of the fifteenth day of May, 1914, and then publicly opened and read, for the furnishing and erection of Garbage Reduction Equipment. This equipment to be placed in the buildings shown on the plans accompanying the specifications.

Bids are to be based upon the specifications prepared under the direction of the Akron City Council.

Payment will be made as stipulated in the form of contract for the performance of the above work, which form of contract is on file in the office of the Director of Public Service.

Copies of the plans, proposal forms, specifications and forms of bonds and contract can be seen at the office of the consulting engineer, R. Wintrop Pratt, Hippodrome Bldg., Cleveland, Ohio, or may be obtained by prospective bidders upon depositing fifteen dollars (\$15), which sum will be refunded on return of the plans and specifications on or before the first day of June, 1914, if same are in good condition when returned. Extra copies of the specifications may be obtained from the consulting engineer upon payment of two dollars (\$2) for each copy, which sum will be refunded if returned copies are in good condition.

Each proposal shall contain the full name of every person, firm or corporation interested in the same, and shall be accompanied by a certified check for the sum of five thousand dollars (\$5000), or by a bond with surety or sureties satisfactory to the Director of Public Service for the same amount.

Said bond or certified check is required as a guarantee that if the bid is accepted a contract will be entered into and the performance of it properly secured.

The contract bond will be for fifty (50) per cent. of the amount of the contract.

The Council of the City of Akron reserves the right to reject any or all bids, waive any informalities in the bids received, and to accept any bid which it deems most favorable to the City of Akron, Ohio.

By order of the Akron City Council.

IRA A. PRIEST, Clerk.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Promoted to General Manager.

The board of directors of the Brownell Company, Dayton, O., has recently appointed I. S. Jones, formerly in charge of the sales department of the company, to the position of general manager. Wm. H. Stewart of Dayton is president of the company.

Contract for Large Oil Engines.

The Fulton Iron Works, St. Louis, Mo., has received an order from the Tucson Electric Light & Power Co. of Tucson, Ariz., for two 500-horse-power Tosi oil engines of the Diesel type. These are said to be the largest engines of this type manufactured to date in this country.

Offices in Bowling Green Building.

The offices of the Warner Foundry & Machine Co. are now located in the Bowling Green Bldg., 11 Broadway, New York city. This company manufactures cast-iron gas and water pipe. William Runkle is president and treasurer; Wm. H. Hulick, vice-president; S. A. Bristol, secretary.

Wightman & Richards' New Offices.

In order to increase the facilities for carrying on their technical advertising work, Wightman & Richards have removed their offices from 29 Broadway to 59 Union Square, New York city. They act as counselors and consultants in technical advertising in connection with their advertising service.

Two Offices Merged.

The branch office of J. K. Hower, manufacturer and shipper of roofing slate, slate blackboards and general slate products, formerly at Slatington, Pa., has been merged with the home office at Danielsville, Pa. R. J. Kichline, in charge of the sales and shipping department, continues in that capacity at Danielsville.

Contract for Oil Mill Machinery.

The French Oil Mill Machinery Co., Piqua, O., has secured the contract from the Russell-Coleman Cotton Oil Co. of San Antonio, Tex., for a complete pressroom-machinery outfit, including presses, cookers, power pumps, accumulators, crushing rolls, cake former, cake stripper, etc. Contract for equipment for the Riverside Cotton Oil Co., Fort Worth, Tex., has also been secured.

Appointed City Engineer.

Julian Kendrick has been appointed city engineer of Birmingham, Ala., succeeding Maury Nicholson, who has been acting city engineer since January 1, 1914, following the resignation of Walter G. Kirkpatrick. Mr. Kendrick was city engineer of Birmingham from 1891 to 1907, when he resigned to accept the position of chief engineer for the Rudolph S. Blome Granitoid Concrete Block Paying Co. of Chicago. While formerly city engineer Mr. Kendrick designed the sewerage system of the city of Birmingham and supervised the construction of a portion of it.

Ballou Safety Rail Joint.

With the view of furnishing the patented lock nut and bolt, invented by C. E. Ballou of Roanoke, Va., the Ballou Safety Rail Joint Co. of that city plans to furnish these equipments for railroads to be used in any ordinary type of rail joint. The fitting consists of an elongated nut with a level that locks on the bolt when set up. It is stated that they can be made to fit any size bolt, and that it will take care of the rail joints effectively, remaining permanently tight. Mr. Ballou states that joints have been on trial on two railroads for the past eight months, and that the nuts have not moved in the least during the test.

Contract for Stationary Asphalt Plant.

The F. D. Cummer & Son Co., Cleveland, O., has recently been awarded the contract by the city of Pittsburgh for a cummer asphalt plant. This plant will be of the double unit stationary asphalt paving type, with two cummer dryers, each with a capacity for turning out 20 tons of sand

or stone per hour, two hot material elevators, two large stone bins, two 15 cubic foot mixers, etc. The plant is so arranged that either one or both units can be run on sheet paving, asphaltic concrete, or asphalt macadam, at the same time. The plant will be housed in a structural frame building covered with corrugated iron to add to its fireproofness. It is expected to have the plant in operation by the early part of July.

Cotton Comber Safety Device.

James E. Keeley, for 21 years a comber in the mills of Massachusetts and Rhode Island, has invented a small attachment for a cotton comber, which, it has been found, will save the teeth of the half lap and also in many cases the knipper knives and the knipper arm. Mr. Keeley, noting the trouble with the machines when the feed broke and wound around the fluted roll, realized that something should be done to prevent the resultant breaking of the needles of the half lap, and also the knipper knives. He evolved a small piece of metal which is attached to the machine in such a manner that when the feed breaks the roll is stopped, and the knife is unable to force its way into the needles of the half lap. Mr. Keeley is now working in the Elizabeth Mill No. 1 at Hills Grove, R. I. He is using the device on one of his machines, where it has been for about a year. It is stated that it has never failed to perform its duties when the feed broke.

Determining the Quality of Paper.

In connection with a discussion regarding the fundamental properties of paper, such as thickness, strength, stretch, opacity and other physical and chemical properties entering into the make-up of a sheet of paper, Arthur D. Little, chemist and engineer, 83 Broad St., Boston, recently brought out the following points: He stated that the number of factors which are concerned with the quality of paper in its many applications to special uses is so great as to prevent consideration or even enumeration of them all. A paper for wrapping hardware or a card for mounting silver jewelry may seem to possess every desirable property, and yet be inefficient because of a trace of sulphur. A printing paper may develop defects or clog the type by mineral filler, a coated paper may pick or develop odor, a writing paper may allow the ink to spread because the size has been converted into peptones by overheating, a filter paper may fail to hold a fine precipitate or unduly retard the passage of liquid, and so on. The suggestion is made to consumers of paper that due to the complexity of the problems involved in the determination of quality, the importance of paper testing, and the advantages to both maker and consumer of carefully considered and intelligently drawn specifications, such specifications should be made by experts in defining quality as a function of intended use.

Brick Paved Highways in Florida.

The extent of the brick highways planned and being constructed in Florida is reflected in the orders for paving bricks being placed for that purpose. G. A. Inglis, of the Copeland-Inglis Shale Brick Co. of Birmingham, Ala., recently secured orders for 5,000,000 paving bricks for the city of Orlando, Fla., and 1,000,000 for use in the vicinity of Tampa; and additional orders are in prospect. It is stated that plans have been made for the completion of a brick highway from Jacksonville to Tampa. Mr. Copeland, of the firm, states that many counties are contracting for the work on the brick highway. This highway is only one of the developments in good roads in Florida, extensive orders having also been placed among contractors for asphalt and other pavements. These large orders for the Copeland-Inglis company have resulted from the introduction of a model experimental road one-half mile long, which proved so satisfactory that many miles have been contracted for since it was first demonstrated. The entire State is interested in the extensive plans for good roads that are under way, and those which will soon be under construction. The counties are co-operating in every practical way in the work. The

plans to construct the roadway from Jacksonville to Tampa are being rapidly put into execution, and the counties involved are rapidly taking up the work of their portions. When completed this will form a highway over 200 miles long, and it should prove to be one of the popular roadways of the State.

TRADE LITERATURE.

Hydraulic Jacks and Lifts.

The hydraulic jacks and lifting tools manufactured by the Watson-Stillman Co., Aldene, N. J., and 50 Church St., New York, are illustrated and described in catalogue No. 91 recently issued by the company. Directions concerning the use and care of hydraulic jacks are contained in the catalogue, and general information regarding pit jacks, motor lifts, battery lifts, flexible piping and other equipment used in connection with these tools is included. It will be sent to interested persons on request.

Speed-Reducing Transmission.

To meet the requirements of motor users for an efficient speed reduction in the various forms in which motors are constantly being operated, the D. O. James Mfg. Co. of Chicago is manufacturing the O. K. Speed Reducer, illustrated and described in bulletin No. 4 issued by the company. The speed ratios are named from 4 to 1 up to 100 to 1. The gearing is entirely enclosed, and operates in oil. Tables of sizes, ratios produced and prices of each size are included in the bulletin, which will be sent to interested persons on request.

Steel Factory Stools.

The increasing attention given to the comfort of factory employees is calling into wide use a convenient form of chair or stool for the use of the employees in their work. To meet this demand the Chicago Hardware Foundry Co., North Chicago, Ill., manufactures steel chairs and stools which are light and strong and made to stand the rough treatment to which they are naturally exposed. They are illustrated and described in a folder recently issued by the company, which also contains price-lists for the different sizes.

American Ingot Iron Culverts.

The corrugated culverts manufactured by the Pennsylvania Metal Culvert Co., Warren, Pa., are illustrated and described in a pamphlet recently issued by the company. These culverts are made from the American ingot iron. Information regarding the non-corrosive quality of American ingot iron is contained in the pamphlet, which quality is obtained by the percentage of purity in this iron, which is by analysis shown to be 99.84. Reports of load tests and photographs showing sections of the corrugated culvert under heavy loads are contained in the pamphlet, and other general information regarding the construction of efficient culverts is given.

Greenberg Better Roads Machinery.

The unique and attractive form of catalogue issued by the A. L. Greenberg Iron Co., Terre Haute, Ind., contains illustrations and descriptions of its extensive line of road machinery, bridges, open hearth iron corrugated culverts, etc. The catalogue is formed so that the name of each item appears to view when the catalogue is opened, so that any particular subject desired is quickly referred to. A booklet has also been issued by the company, in which the advantages of its products are stated and its plan of selling culverts, bridges and road machinery is described. The company pre-pays the freight on its products shipped to any part of the United States. It does not contract to build bridges, but will furnish a superintendent to supervise the construction of long bridges where such assistance is required.

Baker Armored Concrete Pavements.

Information regarding the use of the devices manufactured and controlled by the R. D. Baker Co., Detroit, Mich., for use in connection with laying concrete pavements is contained in the pamphlet issued by the company. These include the Baker armor plates and installation system, steel side forms and automatic finishing machines. The advantages of the expansion joints are explained and illustrations showing the methods of installing the Baker armored joints are included. Specifications for concrete street pavements are given at length in the pamphlet, and the use of armored expansion joints is incorporated in these specifications. A list is given showing location by States where over 3,000,000 square yards of concrete have been laid in which the

Baker armor plates and other equipments have been used. The pamphlet will be sent to persons interested in concrete road building on request to the company.

Alberger Expansion Joints.

The Alberger high-pressure steel expansion joint is described and illustrated in Bulletin No. 19, just issued by the Alberger Pipe & Condenser Co., 140 Cedar St., New York, in which illustrations and descriptions of other types of Alberger expansion joints are also included. This high-pressure steel expansion joint has been developed by the company to meet the requirements of modern practice. It is shown in a sectional view and also exterior views with anchor feet and side outlet. In this expansion joint the soft copper cylinder of the Wainwright improved joint is replaced by a nest of circular discs, stamped from steel plates having a high elastic limit. These discs are welded together, forming a flexible bellows to absorb the movement of the pipe line, and are made of chrome-vanadium steel, heat treated and cooled in oil. This produces a metal with an elastic limit of about 150,000 pounds to the square inch. The joint is designed to withstand the most severe service.

Extension of the Redman Concrete Hollow Wall System.

In addition to the hollow walls for residences and other buildings, as previously illustrated and described in our columns, as made by the W. T. Redman Hollow Wall System of metal cores and forms, the system is now being applied to the construction of various kinds of structures, including silos. The details of construction for silos are illustrated in a pamphlet recently issued. A considerable amount of information is also given on the use of this form of construction in general building with both wood forms and steel forms. Steel forms are manufactured and furnished to territorial representatives by the Virginia Metal Culvert Co. of Roanoke, Va., and the wooden forms may be made from blueprints with dimensions which will enable any carpenter or builder to make and operate them. The pamphlet and information regarding the disposal of territorial rights may be obtained by addressing W. T. Redman, or the Washington Hollow Wall Concrete Co., Kenosha Bldg., Washington, D. C.

Norton Educational Department.

The system by which the Norton Company, Worcester, Mass., has conducted a course of instruction and training for its sales force has recently been extended so that the scope of the work now includes all departments of both the Norton Company and the Norton Grinding Co. The officials have organized for this broadened work an educational department. The details of the system by which the employees in all departments obtain thorough knowledge of the business and constantly improve their qualifications is described in the March issue of Grits and Grinds, published by the Norton Company. Another article is on the subject of Speed Charts for determining graphically surface speed of grinding wheel when revolutions per minute are given, and for determining surface speed of work when revolutions per minute are given. These charts will be sent to any one interested on request. Information on the causes of filling or glazing of grinding wheels is included in the same issue, and also an illustrated article on the methods and machinery used to grind two or more diameters at one cut with a single wheel.

Prizes for Inventions.

In the recent issue of the 180-page booklet on "What to Invent," by Victor J. Evans & Co., 724 9th St., Washington, D. C., a list showing a number of important prizes that have been offered in various countries is given. In this connection Victor J. Evans has recently made an offer of \$1500 in prizes for a prize contest for the best inventions looking to the prevention of industrial accidents or the contracting of vocational diseases. The first prize is \$1000, the second \$300 and the third \$200. It is planned that the decisions shall be rendered by seven judges selected by prominent persons who have been requested to make the selections. It is believed that these prizes will stimulate inventors to look into and work upon the problems in a way that will produce lasting and beneficial results. Full information regarding the contest is presented in the booklet, together with a considerable amount of information of interest to inventors. The development and evolution of invention are brought out in the booklet and illustrated in a striking way. The

strikingly comprehensive publication will be sent to interested persons on request.

Welded Wrought-Iron Pipe.

The method of manufacturing the welded wrought-iron pipe are furnished by the American Pipe & Construction Co., engineers and contractors, 112 N. Broad St., Philadelphia, Pa., is described in a folder issued by the company. Illustrations of the pipe showing the joints after being calked with lead and provided with cement protected covering are shown in the folder. In manufacturing this pipe a wrought-iron shell is welded by the oxy-acetylene process. The bell and spigot pressed steel rings are then welded to the end of the pipe. These rings are of standard specifications, so that they are interchangeable with cast-iron pipes. The shell is then tested to stand 150 pounds working pressure. It is then lined inside with $\frac{1}{2}$ to $\frac{3}{4}$ of an inch of cement, the thickness depending upon the diameter of the pipe. A light outside jacket is placed around the pipe, and the space between the shell and jacket is filled with cement. By this means the shell is protected from water passing through it, and also from ground water. The joint is made with oakum and lead. After the joint has been made the space back of the rings is covered with cement. The rings are also covered with cement, thus protecting the exposed part of the shell from the action of ground water. Service taps are made by putting a clamp around the pipe by which the pipe may be tapped without turning off the water. The folder will be sent to interested persons on request to the company.

Direct Heat Rotary Blast Dryers.

The American process direct heat dryer, as manufactured by the American Process Co., 65 William St., New York, is illustrated and described in catalogue B, issued by the company. This dryer is of the direct heat and direct contact type, consisting essentially of a cylindrical steel shell provided on the interior with longitudinal shelves. Near each end of the shell is a weldless rolled steel tire, which rests upon friction roller wheels. These wheels are rotated either by gearing or chain belting, and impart the rotary motion to the shell. The dryer is set to a gentle slope, which is determined by experience. The wet material and furnace gases enter the shell at the higher end, then the material falls to the bottom of the dryer and is at once caught by the shelf and elevated to almost the highest point of rotation and showered through the furnace gases. This cycle of operations is repeated until the material is discharged in a dry condition from the lower end of the cylinder. It is stated that a number of these dryers are being installed in the South for drying clay, and also oyster shells. The Richmond Guano Co. of Richmond, Va., stated that no difficulty was found in drying four tons of clay per hour, and frequently better results even than that were obtained. It is driven by electric motor, the power being obtained from the local power company. The Bessemer Fire

Brick Co. of Birmingham, Ala., also has one of these dryers in service.

To Move to Honduras.

[New York Journal of Commerce.]

The tariff changes in sugar—based not only on the recently enacted tariff laws, but which have been evolving every since Uncle Sam commenced flying his flag in foreign tropical islands and since the beet-sugar industry made sufficient progress at home to offer competition to the sugarcane—are affecting the old producing centers in an interesting way. It is strikingly presented in a recent editorial of the New Orleans *Times-Democrat*, which advocates that Southern sugar planters unite in a movement to canvass the situation, decide what attitude they will take in the face of the new competition and then let the world know just what the South wants in the premises.

According to this editorial, the sugar-house just below New Orleans is to be dismantled and the machinery removed by steamer to Honduras, where it will be re-erected and put in operation again. It is hoped to have it ready for the cane crop of 1915. The factory will be otherwise improved, added to and equipped, and it is expected to make it first-class in every respect. Although it will be eight miles from the sea, it will have excellent connection with the markets, as a standard-gauge railroad will run from the plantation to the coast, whence the sugar can be shipped to this country.

"This is not the first Louisiana sugar-house or factory to move away to a more tropical land," says the *Times-Democrat*. "Some machinery has already been sent to Cuba and set up there, where it is believed that the sugar industry has a promising future; other lots have gone to Mexico, and now one factory goes to Honduras. In these new ventures not Louisiana machinery alone has been utilized, but Louisiana talent, skill and industry will play a prominent part, for it is recognized that the planters of the State, in their scientific methods, intelligent policies, general advance and improvement have led the cane-sugar world. They have made more inventions, have devised more improvements and economies than those of any other cane country.

"The maintenance here of a sugar school and a sugar experiment station has helped the industry materially throughout the tropical world. Hawaii got some of its

best ideas of cultivation and sugar manufacture from Louisiana. In the development which has recently been marked in the sugar industry of Mexico Louisianians have played a prominent part. Lately there has been a disposition on the part of those interested in banana growing in the West Indies and Central America to supplement it with the manufacture of sugar.

"There is, of course, some danger from political disturbances and revolutions in the Latin-American republics, and this perhaps has caused many to hesitate about putting much capital into these ventures, although even in Mexico the sugar districts have so far experienced little loss or trouble from the revolution and civil war prevailing there.

"But while we hear of neighboring islands and countries benefiting by some unsettlement of sugar conditions in Louisiana and through local capital, enterprise and industry, the cane-growers and sugar manufacturers of the State have as yet held no conference, made no official statement and taken no action in regard to their future policy. It is true that one of the issues involved as regards the Cuban reciprocity treaty has been called under investigation in the Supreme Court. Every effort is being made to expedite the case; but even if expedition is possible, and even if the court hands down a decision covering other sugar propositions, it cannot materially affect the attitude of the Louisiana planters and the course they intend to pursue.

"It is a case where co-operation and unity of action are absolutely necessary for success, and there is reason to believe

that the beet-sugar manufacturers of the West would be glad to co-operate with the cane growers in anything the latter may decide on."

For Opelika Industries.

Chamber of Commerce,

Opelika, Ala., April 9.

Editor Manufacturers Record:

Opelika has just organized one of the liveliest Chambers of Commerce for a city of its size in the South. Mr. M. M. McCall, president of the Opelika Cotton Mills, is president, J. A. Greene is vice-president, George E. Clower is treasurer and the writer is secretary. While the census for 1910 showed a population of 4734, a recent census by city officials shows a population of 5951, or a gain of 25 per cent., and this organization has a membership of over 250.

While only a few weeks old, a number of things are well started, among them being a movement to build an electric line from this city to Auburn, a distance of seven miles.

Opelika has an altitude of 823 feet above sea level. It is a junction of the large railroads from the Northeast and the Northwest; it enjoys splendid freight rates, and is a large wholesale market, more than 30 traveling salesmen working out of here. Convenient passenger trains in all directions are in operation; 17 mails are received and sent each day.

Among some of the new enterprises being promoted for the city are a creamery, canning factory and a gas plant, the franchise having been granted by the City Council for the latter.

W. S. LOWNSBURY, Secretary.

The Floor Everlasting

for

Machine Shops, Factories, Docks, Freight Sheds, Loading Platforms, Foundries, Boiler Shops, Steel Mills, Breweries, Stables, Garages.

Catalogue M is full, complete, informative. It's yours for the asking. A postal card will bring it to you.

REPUBLIC CREOSOTING COMPANY
INDIANAPOLIS, IND.

PLANTS: INDIANAPOLIS MOBILE MINNEAPOLIS

PROPOSALS

Continued from Page 81.

MISCELLANEOUS

Street Car Franchise For Sale

On the 30th of April, eleven A. M., the City of Middlesboro, Ky., through its Treasurer, will offer for sale at the front door of the City Hall, a street-car franchise. For further particulars communicate with J. L. Manning, Middlesboro, Ky.

H. C. CHAPPELL.

Bids for Coal

The Water and Light Department of New Bern, N. C., will receive bids until May 5, 1914, for its coal supply from that date until April 1, 1915. Estimated requirements, 2000 to 3000 tons standard run-of-mine coal.

Send bids to F. T. Patterson, City Clerk, New Bern, N. C.

Metal Fence

Sealed bids will be received and opened by the Board of County Commissioners at 2 P. M. May 5, 1914, for furnishing metal fence for county jail; also, for concrete foundation and putting up fence. On application to R. Whyte, Fort Pierce, Fla., all necessary information will be given.

J. E. FULTZ,
County Clerk.

Saw Mills! Notice

Bids will be received until June 1 from mills for manufacturing into lumber and shingles a lot of about 10,000,000 feet cypress. Particulars from Secretary Board Trade, Dade City, Florida.

Machinery and Material

Bids will be received and publicly opened May 5, 1914, at the Town of Arkansas Pass, Texas, for the purchase by the town of the following material:

- Cast-iron Pipe and Fittings, Class B.
- Standard Fire Hydrants.
- Water Gate Valves.
- 1 Tank and Tower, 60,000 gals. capacity, 120 ft. to bottom of tank.
- 1 45 H. P. Oil Engine.
- 1 35 K. V. A. 3-phase 60-cycle A. C. Generator.
- 1 25 H. P. Oil Engine.
- 1 15 K. V. A. Generator.
- 1 500 G. P. M. 2-stage Centrifugal Pump.
- 1 300 G. P. M. Triplex Pump.
- 1 Switchboard.
- Pole Line material.
- Cement C. L. Brick C. L. Sand C. L. Gravel C. L.

Full list of quantities and specifications may be had by addressing M. Griffin O'Neil & Sons, Dallas, Texas.

JESSE J. TODD, Mayor;
C. E. HENRY,
G. E. GUSTAFSON,
Commissioners.

DAVIDSON PIPE & SUPPLY CO.

Western Avenue, N. S., Pittsburgh, Pa.

Wrought Iron and Steel Pipe

FOR EVERY PURPOSE

Untested Pipe Mill Seconds for Structural and Construction Uses

IMMEDIATE DELIVERIES

BEST PRICES

LET US QUOTE YOU

Open Top Square Tanks FOR SALE

Five open-top square Tanks, made out of 3" Cypress lumber. Price, \$75 each. Address

ILLINOIS KAOLIN CO.

Anna, Ill.

Cyprus Mixing Tanks FOR SALE

Four closed-top round Cypress Mixing Tanks, size 30 inches high outside, 8 feet diameter bottom, fitted up with shaft, cog gears and friction clutch pulley. Price, \$50 each. Address

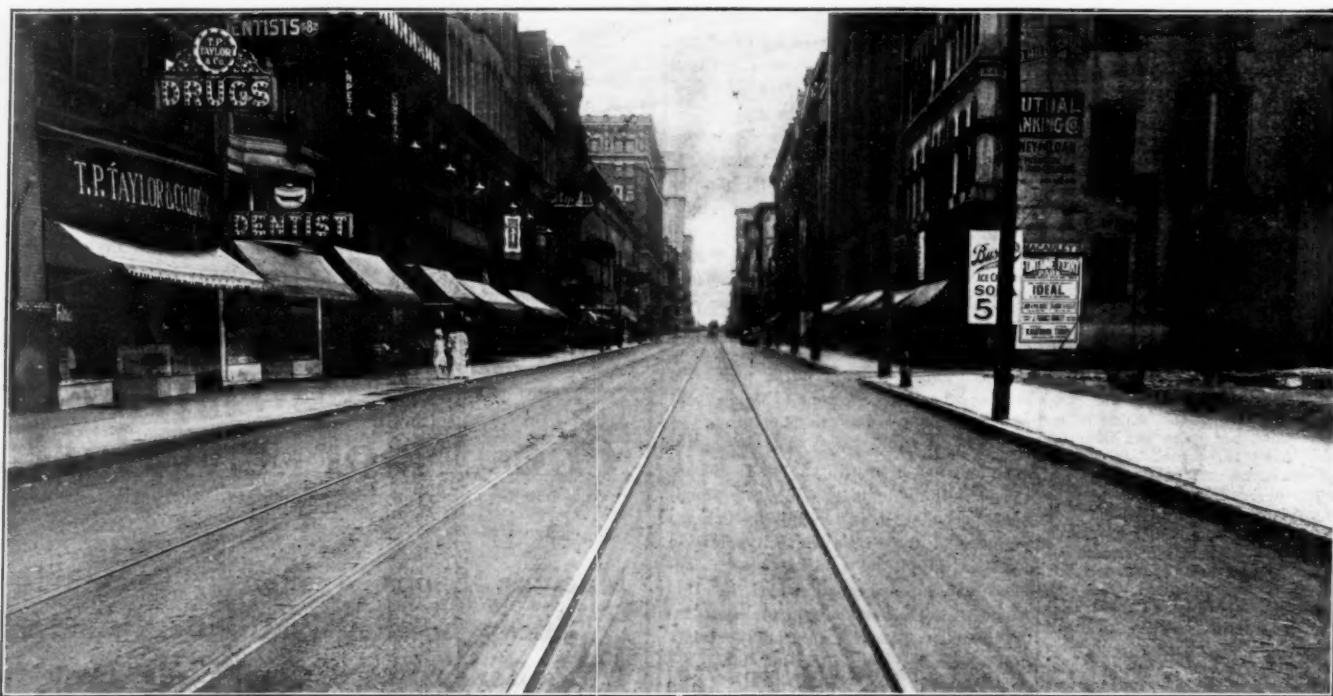
ILLINOIS KAOLIN CO.

Anna, Ill.

Wood Block Pavement

More Durable than Granite

UP-TO-DATE, progressive cities are rapidly realizing that the chief beauty their main streets can have is silence. Nothing more disfigures a city in the minds of visitors than to be greeted with a needless uproar from the traffic on streets that would otherwise be attractive.



Fourth Street, Louisville, Ky., paved with Wood Blocks.

Louisville, Ky., for example, has just paved Fourth Street with wood block pavement, resulting immediately in a great diminution of noise and attracting to the street more traffic, particularly of the better class, and increasing the number of pedestrians. The inevitable result in such cases is a substantial increase in property values and an increase of trade in the adjacent stores. The street, which once was instinctively avoided because of the disturbance and rush and uproar, becomes by this simple change one of the show streets of the town. These are points which appeal to the layman and citizen.

The city engineer chooses wood block pavements for even better reasons. Reckoned purely as an investment, wood block pave-

ment is profitable. Its durability is greater than that of granite or asphalt, and the cost per year of service is less, although the cost of installation is usually a little higher. The wood is unaffected by the vibration of street-car rails and will remain satisfactory right to the edge of the steel, year after year.

The creosote in the wood blocks prevents decay, and the surface compacts under traffic and becomes tougher with age.

The pavement is easy to clean, creates no dust, and, except under peculiar climatic conditions which occur on but a few days of the year, will give such satisfactory traction that teamsters will go out of their way to get on it for the sake of the good footing and easy hauling.

Booklets free on request.

U. S. WOOD PRESERVING COMPANY
165 Broadway, New York City